Chapter

23

Benchmarking

Chapter Objectives

On completion of this chapter, you will be able to understand:

- Types of benchmarking
- Merits and demerits
- Benchmarking process
- Camp benchmarking process
- Five stage benchmarking process
- NPC benchmarking model
- Cost management technique in benchmarking

> Benchmarking is the systematic process of measuring one's performance against recognized leaders for the purpose of determining best practices that lead to superior performance when adapted and utilized.
>
> (Construction Industry Institute 1995).

In 1979, Xerox faced a severe problem of losing the market share rapidly in the copier business. Lower priced, high quality Japanese competitors were squeezing Xerox out of an industry it had created and had always dominated. If the company that made them could not figure out something fast, Xerox copiers would go the way of Hupmobiles, Kaiser Cars and Reo trucks. So, Xerox manufacturing operations started a process which they called 'product quality and feature comparisons'. They bought competing products, catalogued their features and claims and then tore them apart.

There was no doubt that their rivals built good machines. Xerox would have to go deeper to find out how such high-quality machines could be made for least cost. Was it just due to the use of cheap Asian labour? Was the Japanese government pouring subsidies into the industry? Luckily, Fuji Xerox, a Japanese company, was a Xerox affiliate. A team flew from Xerox to Fuji Xerox to analyze their operation in detail. Eventually, they looked at the operations of competing organizations, much the way the Japanese have long studied operations around the world. They became amazed and disappointed with the finding that the Japanese could afford to sell their machines at a price that is equal to the cost of Xerox. The answer was not cheap labour, and it was not subsidy. The answer lay in the details of manufacturing processes—their Japanese rivals were defeating Xerox on the factory floor.

It was the first formal 'benchmarking' and it worked. The knowledge that the Xerox managers carried back to Rochester brought the company's costs down rapidly, without compromising quality. By 1981, the success of the manufacturing operation was so obvious that the top brass declared benchmarking to be standard operating procedure throughout the company. From Xerox, the practice spread through the 1980s, first to other manufacturing giants such as Motorola and DuPont, and later to the service sector.

23.1 Introduction

Benchmarking is the buzzword of the mid-1990s. It is the process of identifying best practice in relation to both products and the processes by which those products are created and delivered. The search for best practice can take place both inside a particular industry and also in other industries. It is a popular method for developing requirements and setting goals. In more conventional terms, benchmarking can be defined as measuring one's performance against that of best-in-class companies, determining how the best-in-class companies achieve those performance levels and using the information as the basis for the company's targets, strategies and implementation. Benchmarking involves research into the best practices at the industry, firm or process level. Benchmarking goes beyond the determination of the industry standard. It breaks the firm's activities down to process operations and looks for the best-in-class for a particular operation. For example, Xerox Corporation studied the retailer L.L. Bean to help them improve their parts distribution process.

Most business processes are common throughout industries. For example, NASA has the same basic human resources requirements for hiring and developing employees as does American Express. British Telecom has the same customer satisfaction survey process as Brooklyn Union Gas. These processes, albeit from different industries, are all common and can be benchmarked very effectively. It's called 'getting out of the box'.

Benchmarking is the process of comparing the cost, cycle time, productivity or quality of a specific process or method to another that is widely considered to be an industry standard or best practice. The result is often a business case for making changes in order to make improvements. The term benchmarking was first used by cobblers to measure ones feet for shoes. They would place the foot on a 'bench' and mark to make the pattern for the shoes. Benchmarking is mostly used to measure performance using a specific indicator (cost per unit of measure, productivity per unit of measure, cycle time of x per unit of measure or defects per unit of measure) resulting in a metric of performance that is then compared to others. It is a process used in management and particularly strategic management, in which organizations evaluate various aspects of their processes in relation to best practice, usually within a peer group defined for the purposes of comparison. This then allows organizations to develop plans on how to make improvements or adopt best practice, usually with the aim of increasing some aspect of performance. Benchmarking may be a one-off event, but is often treated as a continuous process in which organizations continually seek to challenge their practices.

In all the earlier paragraphs, an earnest effort has been deployed to create the diffusion of the topic from every possible perspective. Benchmarking is a continuous process for continuous development. And in the process of development nobody can claim that it reaches to the apex. Today you will benchmark others and tomorrow others will benchmark you. Benchmarking brings success when you beat the targets and the time comes for revising your benchmark. Now you need to fight at a higher level than ever before. The strategic war

never ends. Savvy executives use benchmarking to support a range of critical business decisions. Since benchmarking can be adapted to fulfil nearly every business need, it is perhaps the most comprehensive business management tool available.

A simple litmus test will determine whether a company is ready for and capable of undertaking benchmarking as a formal management process. Ask whether your organization can afford to stop improving. It is difficult to imagine many organizations that can answer yes to that question and stay in business for long. Every organization strives to enhance its position over time and benchmarking works as the trigger point. Obviously, it requires commitment, maturity and competitive edge. However, it may start with a narrower perspective that requires less difficulty and resource involvement. As it moves on the process, new challenges come and the benchmarking process also becomes complex. Where target is to be the leader, benchmarking has no alternative; as in business there is no concept of 'by-born-leader'. Here, leadership is proven.

23.2 Brief History

Benchmarking was originally invented as a formal process by Rank Xerox and is usually carried out by individual companies. However, it may be carried out collaboratively by group of companies also. The benefits of benchmarking have long been used and recognized in the manufacturing industry. In 1912, Henry Ford watched men cut meat during a tour in a Chicago slaughterhouse. Carcasses hung from hooks mounted on a monorail. After each man performed his job, he pushed the carcass to the next station. Less than six months later, the world's first assembly line started producing magnetos in the Ford Highland Park Plant.

Although benchmarking has been practiced since the beginning of modern manufacturing, it has only recently entered the official business lexicon. During the 1970s and 1980s, benchmarking referred primarily to numerical measurements used to gauge the performance of a function, operation or business process relative to others. In this respect, managers used benchmarks as divining rods to lead the organization to hidden opportunities to innovate and improve performance. Benchmarking also enabled managers to monitor manufacturing ideals such as total quality and best-in-class in terms of objective, quantifiable metrics. Although this metric-focused benchmarking enabled companies to compare organizational performance against their competitors, these statistical benchmarks provided incomplete comparisons. They were superficial in the sense that they drew attention to performance gaps without offering any evidence or explanation for the reason behind it. The performance gaps that surfaced through benchmark comparisons reflected significant differences in operating systems and procedures. The root causes of operating differences usually could not be discerned from the metrical benchmarks alone.

In light of shortcomings of metrical benchmarking, executives extended both the scope and the functional application of benchmarking methodology. In the 1990s, executives began using benchmarking to identify both the metrical indicators and the key operational drivers of performance excellence. Benchmarking came to refer to the process of investigation and discovery that emphasizes the operating procedures as the things of greatest value. Consequently, 'best practices benchmarking' came to describe the process of seeking out and studying the best internal and external practices that produce superior business results. Benchmarking also grew from a performance measurement tool to an advanced business concept with general management applications in an array of operating areas. Some of the applications of benchmarking are presented in Table 23.1 with the respective operating areas.

Table 23.1 Application of Benchmarking

Areas	*Application*
Strategic Planning	The executives can refine the corporate strategy from the lessons learned in a dynamic market by studying the experiences and competitive strategies of others, project the possible outcomes of changing current business objectives and forecast potential cataclysmic shifts brought on by changing market circumstances. By reviewing the strategies of competitors and other industry front runners, executives can validate the adequacy of the current goals, plans and strategies.
Change Management	Business operates in a dynamic environment where change is the rule of survival. Benchmarking teams carry the mandate to look far and wide for better operating practices. They can sound the alarm when the first signs appear on the horizon that the organization has fallen behind the competition or has failed to take advantage of important operating improvements developed elsewhere. Best practices benchmarking provides executives with the tool, the rationale and the process to accept change as constant, inevitable and good.
Process Re-engineering	Benchmarking is a necessity for companies engaged in re-engineering processes and systems. Due to the technological advancements, better processes evolved every time outdating the older one.
Knowledge Management	Benchmarking is a tool for achieving idea enrichment and general education that can be spread throughout the organization. Successful benchmarkers return to their organizations with valuable trophies, new ideas and approaches for accomplishing old tasks. By regularly benchmarking critical functions, organizations ensure they remain open to new ideas, changing trends and evolving technology. If seeing is believing, then benchmarking is an effective process to ensure that managers and front-line operators see other approaches to accomplishing the activities over which they preside.
Advanced Problem-solving	Benchmarking frequently demonstrates its value in the problem-solving process. Ironically, most corporate problem-solving processes do not methodically look outside the team or organization for solutions. Standard problem-solving processes provide a structure that makes work groups more effective; they also prompt teams to root their analysis in empirical data, which supports management by fact rather than fancy. But most problem solving processes indirectly encourage teams to reinvent the wheel because they seldom encourage work groups to consider external experience in developing their solutions. As an enabling tool for problem-solving, benchmarking frequently produces elegant answers for thorny operating issues.

Source: Authors.

Benchmarking in the 1990s gave executives a panoramic view of the competitive landscape and enabled them to revolutionize their own business processes with innovative best practices. Because of its proven ability to drive consistent business results, best practice benchmarking has grown to become an invaluable management tool. In fact, a survey conducted in 1999 by Bain and Co. identified benchmarking as one of the most highly utilized management tools.

For nearly three decades, executives have used both metrical and best practice benchmarking to drive significant performance improvements. However, today's high-octane business environment has had an interesting effect on executives' use of benchmarking. On one hand,

executives need benchmarking data more than ever to keep abreast of industry trends amid fierce global competition. On the other hand, executives are moving faster than ever, and they feel that they do not have the time to undergo a benchmarking project that requires several months to complete. Working in the 'Internet time' intensifies the need for benchmarking data, yet requires the data to be collected much more quickly. The Internet has almost entirely eliminated the cycle time for benchmarking projects. Online databases can be used to access benchmarking data without undertaking lengthy benchmarking projects.

In 2008, a comprehensive survey on benchmarking was commissioned by the Global Benchmarking Network (a network of benchmarking centres representing 22 countries where Dr Robert Camp, the founder of benchmarking, is the honorary president). Over 450 organizations responded from over 40 countries. The results showed that: mission and vision statements and customer (client) surveys are the mostly used (by 77% of the organizations) of 20 improvement tools, followed by SWOT (72%) and informal benchmarking (68%). Performance benchmarking was used by 49% of the respondents and best practice benchmarking by 39%. The tools that are likely to increase in popularity the most over the next three years are performance benchmarking, informal benchmarking, SWOT and best practice benchmarking. Over 60% of organizations that are not currently using these tools indicated that they are likely to use them in the next three years.

23.3 Types of Benchmarking

Benchmarking is a systematic comparison of organizational processes and performance to create new standards or to improve processes. Benchmarking models are used to determine how well a business unit, division, organization or corporation is performing compared with other similar organizations. A Benchmark is often used for improving communication, professionalizing the organization/processes or for budgetary reasons. Traditionally, performance measures have been compared with previous measures from the same organization at different times. Although this can be a good indication of the rate of improvement within the organization, it could be that although the organization is improving, the competition is improving faster. Due to the varieties of issues which may be the ultimate target of benchmarking, different types of benchmarking has been emerged both in literature and practice by the time. For example, four common categories of benchmarking are:

1. Internal Benchmarking—when benchmarking is initiated within a corporation, for example, between business units.
2. Competitive Benchmarking—when benchmarking is done with competitors' performance or processes.
3. Functional Benchmarking—when benchmarking of similar processes is done within an industry.
4. Generic Benchmarking—when benchmarking is done through comparison of operations between unrelated industries.

However, some other categories of benchmarking also exist in practice. It simply originates from the strategy of the companies who are going to install the benchmarking process. A brief discussion on different types of benchmarking is presented further:

1. **Process Benchmarking**: The initiating firm focuses its observation and investigation of business processes with a goal of identifying and observing the best practices from one or more benchmark firms. Business is nothing but the successful completion of

some processes leading to the ultimate goal. And probably this is the best to benchmark some key processes first to ensure an easy success. Activity analysis may be a simple way to identify key processes to start. The objective may be set to the achievement of cost and efficiency and outsourcing may be a consideration for application to back office processes.

2. **Financial Benchmarking:** Market leaders are ultimately set on the basis of some financial parameters. When a firm is competing to be a market leader then it requires a good strength in each financial parameters and so financial benchmarking becomes practicable. Performing a financial analysis and comparing the results in an effort to assess overall competitiveness with competitors or within the industry or even in the market is the very basic step in financial benchmarking.
3. **Performance Benchmarking:** Performance is a relative issue that depends on the situation under consideration. Performance may be evaluated in terms of operation, achievements, image, efficiency and so many other things. Identification of criteria on which performance will be measured is very important in performance benchmarking. It allows the initiator firm to assess their competitive position in terms of selected performance criteria with those of target firms, to find out the limitations and to devise the way out to bid the target.
4. **Product Benchmarking:** New product development and enrichment of new product successfully probably has no alternatives for success. And product benchmarking focuses on the process of designing new products or upgradation to current ones. This process can sometimes involve reverse engineering which is taking apart competitors' products to find strengths and weaknesses.
5. **Strategic Benchmarking:** Strategic benchmarking is done at strategic level. Vision, mission, goals and objectives of firms ultimately lead the business function. Thus, these things should be rightly tuned up so that benchmarking does not become confusing and contradictory with the strategy. For example, Structural Engineers Limited (SEL) in Bangladesh is guided by 'quality comes first; profit is its logical sequence'. And if it goes for quality as a strategic target, it will not be contradictory with current focus. The process involves observing how others compete. This type is usually not industry specific—meaning it is the best to look at other industries also.
6. **Functional Benchmarking:** In functional benchmarking, a company will focus its benchmarking on a single function in order to improve the operation of that particular function. For example, Telecom Australia might benchmark its billing process against the billing process of British Telecom. Complex functions such as human resources, finance and accounting and information and communication technology are unlikely to be directly comparable in terms of cost and efficiency and may need to be segregated into processes to make valid comparison.
7. **Technical Benchmarking:** There may exist a couple of ways of doing a particular job. It depends on the technical definition and expertise available. Thus, identification of the best technique becomes prerogative in such situation. To choose or develop the right technique, technical benchmarking is very useful. Its use is particularly well developed within the automotive industry (and so sometimes, it is referred to as automotive benchmarking), where it is vital to design products that match precise user expectations, at minimum possible cost, by applying the best technologies available worldwide. Many data are obtained by fully disassembling existing cars and their systems. Such analyses were initially carried out in-house by car makers and their suppliers. However, as they are expensive, they are increasingly outsourced to companies specialized in this area. Indeed, outsourcing has enabled a drastic decrease in costs for each company (by cost sharing) and the development of very efficient tools (standards, software). And even sometimes technologies are licensed so that it cannot be copied.

8. **Metric Benchmarking:** Another approach to making comparisons involves using more aggregative cost or production information to identify strong and weak performing units. The two most common forms of quantitative analysis used in metric benchmarking are data envelope analysis (DEA) and regression analysis. DEA estimates the cost level which an efficient firm should be able to achieve in a particular market. In infrastructure regulation, DEA can be used to reward companies whose costs are near the efficient frontier with additional profits. Regression analysis estimates what the average firm should be able to achieve. With regression analysis firms that performed better than average can be rewarded while firms that performed worse than average can be penalized. Such benchmarking studies are used to create yardstick comparisons, allowing outsiders to evaluate the performance of operators in an industry. A variety of advanced statistical techniques, including stochastic frontier analysis, have been utilized to identify high performers and weak performers in a number of industries, including applications to schools, hospitals, water utilities and electric utilities.
9. **Internal Benchmarking:** Perhaps the orientation of benchmarking should be with internal benchmarking. Within the firm, different functions are simultaneously performed as a part of the business that may vary in terms of performance. Obviously some functions outperform others that may be considered for benchmarking. The objective of internal benchmarking is to identify the internal performance standards of an organization. Internal benchmarking often brings advantages through the sharing of a significant amount of information, identifying best internal practices and transferring those to other parts of the organization. This internal knowledge can become the baseline for later investigation and measurement involving external benchmarking partners.
10. **Competitive Benchmarking:** Benchmarking against competitors is the common philosophy. Direct competitors are the most obvious to benchmark against. The objective is to compare companies in the same markets that have competing products or services or work processes. When Coca-Cola competes with Pepsi, it becomes an example of competitive benchmarking. It helps to identify the related competitive performance within the industry. Again, execution of such benchmarking is difficult due to the availability of information.
11. **International Benchmarking**: When 'national' businesses, against which to benchmark, become exhausted or insufficient then international benchmarking brings into focus to achieve world-class status. Best practitioners are identified and analyzed elsewhere in the world. Globalization and advances in information technology broaden the opportunities for international projects. Business should have no boundary and it needs to compete in an international set up that necessitates international benchmarking. However, these can take more time and resources to set up and implement and the results may need careful analysis due to national differences.

The discussion on different types of benchmarking gives us some strategic views. The types may be considered from micro or macro point of view. The micro viewpoint represents that the benchmarking is done within the firm but when it extends beyond the boundary of a firm, macro viewpoint emerges. Again it may be discussed in terms of unit on which benchmarking is done.

Figures 23.1 is drawn to put a strategic focus on the different types of benchmarking. In micro and macro view point of benchmarking (Figure 23.1a), internal benchmarking is very simple whereas international benchmarking topped the ladder in terms of focus and complexity. Same ladder is drawn in unit benchmarking which shows that functional is the simplest whereas strategic benchmarking is ranked at the highest level of complexity and focus (Figure 23.1b). The figures are drawn to give a guideline to companies who are thinking

Figure 23.1(a) Benchmarking Ladder—Micro Versus Macro

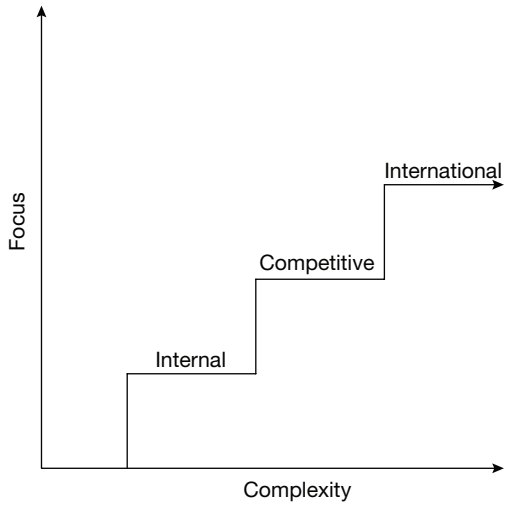
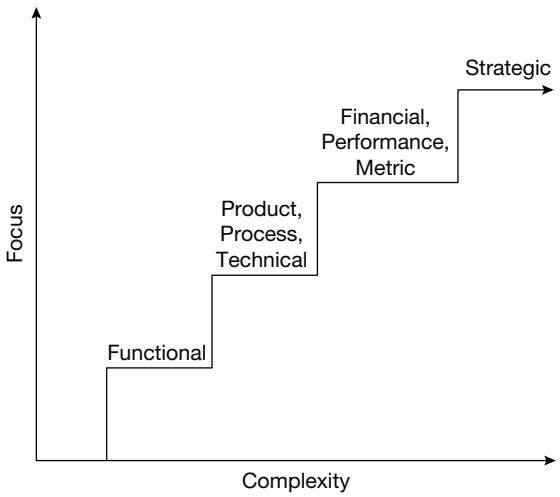


Figure 23.1(b) Benchmarking Ladder—Unit



Source: Authors.

for benchmarking. It should start with the simplest one (the bottom of the ladder) and move upward, gradually. You may target to benchmark at a higher level initially and may succeed also. But there may be an imbedded problem in terms of sustainability. Attaining something so easily and so early is difficult and also will be very transitory. Thus, following up the ladder ensures sustainable improvement with achieving the ultimate goal.

23.4 Advantages of Benchmarking

Benchmarking brings a lot of advantages for business (Exhibit 23.1). Competition is a natural game and each game must have some targets. Business is also like a game with a lot of players in the market. But outperforming all in the market is not so simple and easy to reach to the game. It needs a careful selection of some techniques at strategic level. Benchmarking is such a strategic technique that is highly successful. Copying others to beat them is probably the easiest way of outperforming. Setting some organic targets may not be of that much difficult but no guarantee is there that it will bring success. Organic targets should be there. But, if you want to outperform other, it is better to target other whom you want to perform, benchmark other and analyze the success factors. Benchmarking process is tuned up with all of these requirements. This is a big advantage that benchmarking brings for the companies. Apart from this, it also brings some supplementary advantages listed as follows:

1. Establish a culture of continuous improvement to achieve excellence.
2. Enhance creativity by devaluing the not-invented-here syndrome.
3. Encourage more sensitivity to changes in the external environment.
4. Transform the corporate mindset from relative contentment to a strong sense of urgency for ongoing improvement.
5. Put more emphasis on the maximization of resources through setting performance targets.
6. Prioritize areas that need immediate attention and improvement.
7. Reap advantages from the application of best practices collectively with benchmarking partners.

Exhibit 23.1 Benchmarking in Xerox: Case in Action

Benchmarking in Xerox is a pioneering move in the history of benchmarking. Xerox has regained its leading position from a so fragile condition. The journey of benchmarking that starts in Xerox has captured an important position in setting strategic agenda irrespective of country and company. The following points rightly present the rationale of its being so important.

1. Xerox's success is the first one in the history of benchmarking.
2. From a critical situation in 1972, Xerox became what we call today a 'top benchmarking partner'.
3. In 1979, Xerox starts benchmarking.
4. In 1989, Xerox wins the Malcolm Baldrige National Quality Award.
5. Product performance during the first 30 days of installation has increased by 40%.
6. Manufacturing lead times have been reduced by 50%.
7. Manufacturing labour and material overheads rates have been improved by 31% and 46%, respectively.
8. Customer retention rate is 20% better than the U.S. industry average.
9. A company-wide performance measurement covering 240 key areas of product, service and business performance.
10. The targets of world leaders.
11. Tremendous gains in quality (78% defect reduction, increased reliability with 40% decrease in unscheduled maintenance, increased copy quality and 27% decrease in service response time).
12. Significant reductions in labour and material overheads.
13. First company to offer three-year product warranty.

23.5 Dangers of Benchmarking

Benchmarking is based on learning from others, rather than developing new and improved approaches. Since the process being studied is there for all to see, a firm will find that benchmarking cannot give them a sustained competitive advantage. Although helpful, benchmarking should never be the primary strategy for improvement. Thus, companies should be careful enough at the time of setting benchmarking strategy. It should also have some improved approaches for lingering competitive advantage once achieved.

Competitive analysis is an approach to goal setting used by many firms. This approach is essentially a benchmarking approach that is confined to one's own industry. Although common, competitive analysis virtually guarantees second-rate quality because the firm will always be following its competitor. If the entire industry employs the approach it will lead to stagnation for the entire industry, setting them up for eventual replacement by outside innovators. Here, careful attention may be employed for a competitive analysis across the industries.

Benchmarking processes are not easy to implement, and to be successful an organization must overcome numerous barriers. Some private sector companies fear that they may lose their competitive advantage by sharing information, and others fear exposure of organizational weakness. Use of an identity-blind process, whereby data are posted without attribution, can mitigate these concerns.

For some organizations, arrogance is a major obstacle. These organizations may believe they are the best, so why benchmark? As renowned management consultant W. Edwards Deming would probably ask super confident organizations that lack performance data and comparison to other organizations: How do you know? Other organizations are unaware of the value of benchmarking and believe that benchmarking systems do not adequately address their needs. Benchmarking agreements and training increase familiarity with the benchmarking process and can help to reduce these barriers.

One of the greatest barriers to benchmarking is lack of resources. Most organizations are leaner today than in the past, and dedicating the essential resources can be difficult. For some organizations, project processes and computer systems are not sufficiently developed to easily support benchmarking (Construction Industry Institute 2002). For these organizations the benchmarking process will require more manual intervention and consequently greater resources. As project processes become automated, this barrier should shrink.

One of the biggest mistakes organizations make when first benchmarking is that they limit their benchmarking activity to their own industry. Benchmarking within your industry is essential. However, you already have a pretty good idea how your industry performs so it is imperative that you reach outside and above your own industry into other industries that perform a similar process but may have to perform this process extremely well in order to succeed. Here are a couple of examples of how one industry can leapfrog their competitor by learning and adapting a similar process from a totally different industry (Table 23.2).

Table 23.2 Benchmarking Solution from Different Industry

Problem	*Solution*
Customer surveys indicate long wait times for hotel rooms, especially for repeat customers.	Benchmarked admittance process with hospital emergency room departments resulting in dramatically reduced check-in times. Also netted less employees needed, automation for frequent hotel guests and many more process improvements.

Routine maintenance on aircraft between flights such as refuelling, cleaning, tire checks taking too long. Plane on the ground means more planes and personnel are required to maintain high level of service and schedules. Need to reduce ground time required in between flights without sacrificing quality or safety of passengers.	Initial benchmarking research indicated we are already brainstormed and discovered. Indy 500 racing team pit crews have a similar maintenance process and a similar requirement to get their vehicle back on the track as quickly and safely as possible. After benchmarking pit crews maintenance, turnaround times for aircraft between flights were reduced by more than half saving/ making the airline millions of dollars within the first few years.

Source: Authors.

23.6 Benchmarking Process

Benchmarking is a tough process that needs a lot of commitment to succeed. More than once benchmarking projects end with the 'they are different from us' syndrome or competitive sensitivity which prevents the free flow of information that is necessary. However, comparing performances and processes with 'best-in-class' is important and should ideally be done on a continuous basis. Typically, benchmarking process involves the following common steps:

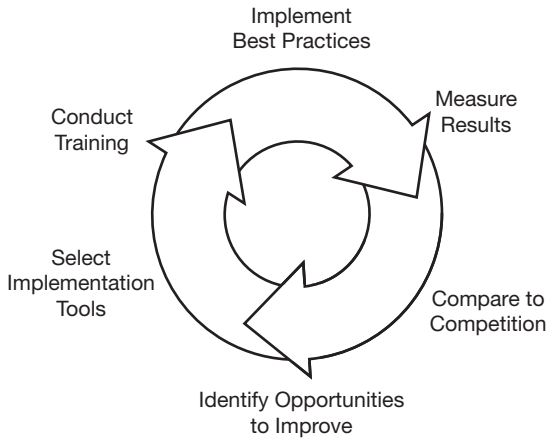
1. Scope definition
2. Choose benchmark partner(s)
3. Determine measurement methods, units, indicators and data collection method
4. Data collection
5. Analysis of the discrepancies
6. Present the results and discuss implications/improvement areas and goals
7. Make improvement plans or new procedures
8. Monitor progress and plan ongoing benchmark

Management theory and practice have long established a link between effective performance measures and effective management (Drucker 1995). The effectiveness of any given performance measure depends on how it will be used. And the strategic issue encircling the performance measures depends on comparability with others to devise post facto analysis that is the genesis of benchmarking. The comparisons may lead progress in achieving given goals or targets, assess trends in performance over time or weigh the performance of one organization against another (Poister 2003).

Performance measures used as a management tool need to be broadened to include every possible parameters related to success. One approach is to use an array or scorecard composed of multiple measures. The balanced scorecard is one such approach that assesses an organization and its programmes from four different perspectives: customer, employee, process and finance. The scorecard creates a holistic model of the strategy that allows all employees to see how they contribute to organizational success (Kaplan and Norton 1996).

Benchmarking is a core component of continuous improvement programmes and an integral part of the continuous improvement cycle as shown in Figure 23.2. Measuring, comparing to competition and identifying opportunities for improvements are the essence of benchmarking. As Gregory Watson noted in his *Benchmarking Workbook*, 12 of the 32 criteria for the Malcolm Baldrige National Quality Award refer to benchmarking as a key component of quality assurance and process improvement (Watson 1992). The role of benchmarking in process improvement is similar to that of the six sigma process improvement methodology.

Figure 23.2 Continuous Improvement Cycle



Source: Construction Industry Institute (2004).

The six sigma methodology comprises five integrated steps: define, measure, analyze, improve and control (DMAIC). These steps are also central to the benchmarking process.

23.7 Use of Models

The above-mentioned benchmarking process may be used to develop models that will cater specific needs under consideration. Process models have two basic attributes that make them useful when used appropriately.

Structure: Models provide structure to set the target and means to reach the target. They provide a common process in a language understandable to all. Thus, model entails a common framework with all references to make it free from misinterpretation and misuse.

Framework for Action: A process model provides the basic framework for action. All types of variations are possible within that framework, and the process can be tailored to fit the specific requirements of the individuals, groups and organizations. Using model is thus important to customize the benchmarking process with the situation.

Any type of benchmarking process model should provide an adequate framework for the successful planning and execution of a benchmarking exercise. It should be flexible enough to encourage people to modify the process to suit their needs and project requirements. Models can help interpret any terminology that is required in the benchmarking process. A particular virtue of using a model is that it facilitates the development of a shared vocabulary. Such language models provide a plan of action and behaviour that can be understood by anyone in the organization. For example, the word 'recycling' is used at the end of several benchmarking process models to denote the concept of continuous improvement and to encourage the linking of benchmarking activities. The word 'recycling' may activate a variety of images to different people. So putting the word in the context of a benchmarking model helps people interpret the intended meaning of the word.

23.8 Requirements for a Successful Benchmarking Model

Modelling is a technical issue that demands expertise and judgment from the team who is attached with such responsibility. Thus, in most of the successful benchmarking modelling, companies seek help from consultants having earlier track records with such engagements. However, modelling needs some common prerequisites to be fulfilled. There is no such guarantee that every model will bring success. To make a benchmarking model successful, it should fulfil all requirements needed for successful benchmarking. The requirements are sequenced as follows:

1. **Basic:** Forming a very basic model understandable to all is an important requirement. Steps in the model should be logically presented and unwanted steps should be discarded well in advance that may spoil the full process.
2. **Clear:** Keeping the model clear so that it can be explained clearly, understood clearly and at the same time implemented easily. If the model is clear, the implementer can easily comprehend the rationality of different steps of the model.
3. **Planning and Organization:** The model is required to be planned wisely and organized critically so that the ultimate target is achieved. Planning and organization of the goal is the nucleus of any benchmarking model.
4. **Understanding the Requirements:** The benchmarking model should be based on the clear understanding of the requirements. Otherwise it may produce contradictory or unexpected results.
5. **Team Building:** Members of the benchmarking team should be carefully selected. The success of the model will ultimately depend on the capacity of the team who convert the model into action leading to success.
6. **Resources:** Management should always be careful regarding the availability of resources required for the implementation such as people, time, money and so on. Failure is a must if benchmarking process suffers from lack of resources.
7. **Tools and Techniques:** Use of effective project planning tools and techniques make the success near and easier. Difficulties are the selection and execution of those tools and techniques.
8. **Data Collection Methodology:** The success of the benchmarking process also depends on the sufficiency and accuracy of the data collected in this regard. Collected data will be the input of the model. If the input goes wrong, ultimately it will generate wrong results. Thus, data collection methodology should be tested and validated long before its use.
9. **Protocol:** Establishing appropriate benchmarking protocols, defining expected behaviours and outcomes toward benchmarking partners is an important requirement when benchmarking is done for mutual benefits.
10. **Customer-focused Benchmarking:** Use customer-focused benchmarking to provide direction; to create a set of expectations regarding the information; how it is to be gathered, reported and used to review and adjust progress against customer requirements usually in the form of a formally agreed contract.

Modelling is a technical job that requires technical expertise. It devises the full process, technicalities required, commitment level, scope of activities and limiting factors. And whenever it is for benchmarking, the complexity intensifies further as such model targets to outperform an existing model. Each steps mentioned earlier should be carefully administered to build a successful model. Some tips have been presented to show some important short

Exhibit 23.2 Benchmarking Tips: Make Your Model Generic, Customized and Consistent

The benchmarking process should be consistent within an organization. Although there should be flexibility to accommodate some variation, there is no need for a unique benchmarking process for every department, division or location in an organization.

1. The ability to develop cross-functional or cross-divisional benchmarking teams is hindered by the development of different models.
2. Different models and approaches to benchmarking within an organization indicate the existence of different communications, training programmes and possible management cultures in different segments of the company.
3. The result is inefficient use of resources, duplication of effort and confusion among employees confronted by a variety of different models within their own organization.
4. Multiple processes also create confusion among the organization's benchmarking partners who would expect some level of consistency among the approaches used by the various subgroups. The lack of co-ordination among the divisions forces the benchmarking partners, as information providers, to produce multiple reports.
5. Multiple models usually indicate multiple databases. Producing records and results becomes fragmented within an organization. Duplication of effort and lack of coordination probably also represent significant costs.

Thus, the challenge is to construct a generic benchmarking model that could be applied to any benchmarking project by any type of organization. There are many benchmarking models to begin with. Most of the ingredients are common across the models. One reason for this is that those creating the models were strongly influenced by early published examples shared through quality networks created by, for example, Alcoa, AT&T, Florida Power & Light, Motorola, Westinghouse and Xerox. Another reason is that the early models worked, and not surprisingly, companies that received the Malcolm Baldrige National Quality Award and shared their benchmarking process, specifically Motorola, Westinghouse and Xerox became the models for others to benchmark. Whatever model you choose, let it be agreed upon by all involved in the benchmarking project and used consistently by all benchmarking teams.

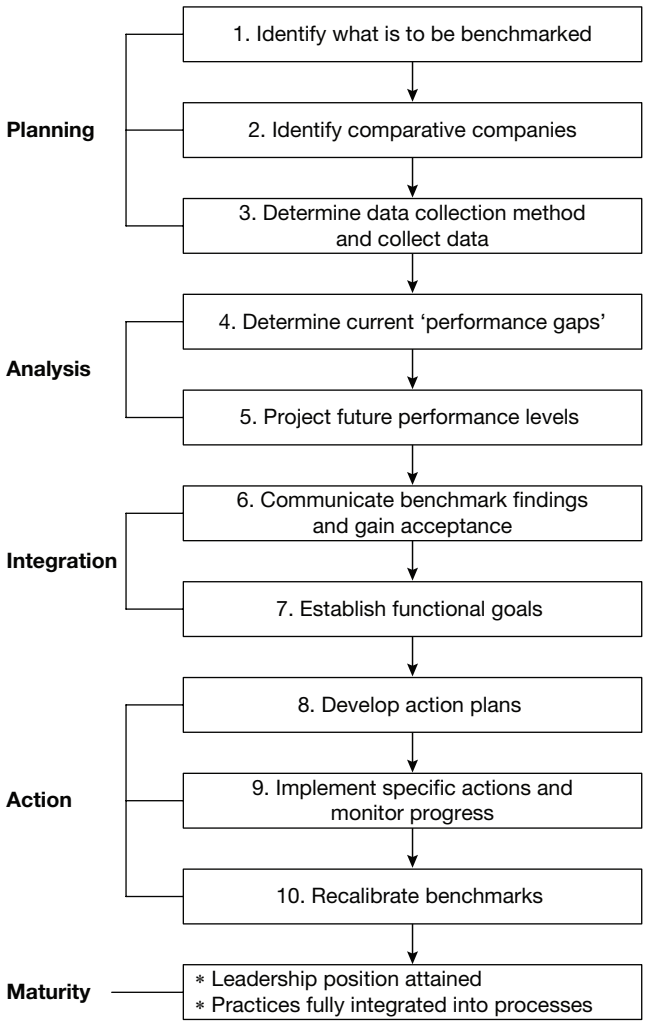
cuts. These are not precise guidelines but sometimes found very strong tonic in the process of reaching to the target.

23.9 Camp Benchmarking Process

Benchmarking and Robert C. Camp is synonymous due to the pioneering work of Camp on benchmarking process that was applied successfully in Xerox. The benchmarking process of Camp (Figure 23.3) becomes successful and achieved popularity. Even there exists couple of other benchmarking processes developed by different institutions, consultants and researchers with individual registered trade marks. Historically, benchmarking is based on Kaizen and competitive advantage thinking. The benchmarking process as proposed by Camp lists the following steps (Camp 1989):

1. Planning
   i. Identify what is to be benchmarked
   ii. Identify comparative companies
   iii. Determine data collection method and collect data
2. Analysis
   i. Determine current performance 'gap'
   ii. Project future performance levels

Figure 23.3 Camp Benchmarking Process



Source: Adapted by Camp (1989).

3. Integration
   i. Communicate benchmark findings and gain acceptance
   ii. Establish functional goals
4. Action
   i. Develop action plans
   ii. Implement specific actions and monitor progress
   iii. Recalibrate benchmarks
5. Maturity
   i. Leadership position attained
   ii. Practices fully integrated into process

The benchmarking process is explained further in some details.

1. Planning: Planning is the first phase of benchmarking and seeks answers to three important questions that ultimately initiate formal benchmarking process. The questions to be answered are:

i. What is to be benchmarked? Every function of an organization has or delivers a 'product' or output. Benchmarking is appropriate for any output of a process or function, whether it is a physical good, an order, a shipment, an invoice, a service or a report.

ii. To whom or what will we compare? Business-to-business, direct competitors are certainly prime candidates to benchmark. But they are not the only targets. Benchmarking must be conducted against the best companies and business functions regardless of where they exist.

iii. How will the data be collected? There is no one way to conduct benchmarking investigations. There exists an infinite variety of ways to obtain required data and most of the data needed are readily and publicly available.

2. Analysis: The analysis phase must involve a careful understanding of existing process and practices, as well as those of the organizations being benchmarked. What is desired is an understanding of internal performance on which to assess strengths and weaknesses. The answer to the following questions may be searched for:

i. Whether the targeted organization is performing better?
ii. Why are they better?
iii. By how much?
iv. What best practices are being used now or can be anticipated?
v. How can their practices be incorporated or adapted for use?

Answers to these questions will define the dimensions of any performance gap: negative, positive or parity. The gap provides an objective basis on which to act for closing the gap or capitalize on any advantage.

3. Integration: Integration is the process of using benchmark findings to set operational targets for change. It involves careful planning to incorporate new practices in the operation and to ensure that benchmark findings are incorporated in all formal planning processes. The required steps for successful implementation may be:

Step 1: Gain operational and management acceptance of benchmark findings. Clearly and convincingly demonstrate findings as correct and based on substantive data.

Step 2: Develop action plans.

Step 3: Communicate findings to all organizational levels to obtain support, commitment and ownership.

4. Action: Convert benchmark findings, and operational principles based on them, to specific actions to be taken. Put in place a periodic measurement and assessment of achievement. Use the creative talents of the people who actually perform work tasks to determine how the findings can be incorporated into the work processes. Any plan for change also should contain milestones for updating the benchmark findings, and an ongoing reporting mechanism. Progress towards benchmark findings must be reported to all employees.

5. Maturity: Maturity will be reached when best industry practices are incorporated in all business processes ensuring superiority. It can be tested as follows:

i. Would a knowledgeable business person prefer the revised process it is made available to them?
ii. Do other organizations benchmark your internal operations?

Maturity also is achieved when benchmarking becomes an ongoing, essential and self-initiated facet of the management process. Benchmarking becomes institutionalized and is done at all appropriate levels of the organization, not by specialists.

As per Camp, benchmarking is essentially a 4-stage process with 10 consecutive tasks. If these are done successfully, maturity comes and makes an end to the benchmarking process. However, in literature, some other variants of explanation are available. For example, the table below shows some other stages though the stages as proposed by Camp is common.

Study Reference	*Phases*	*Steps*
Camp (1994)	Planning, Analysis, Integration, Action and Maturity	17
Burghardt (1993)	Problem Identification, Partner Selection, Analysis and Implementation, Improvement	10
Horvath (1994)	Preliminary Preparation, Analysis and Implementation	14
Fromm (1994)	Planning, Data Collection, Analysis and Implementation	12
Ohinata (1994)	Planning, Team Building, Partner Selection, Data Collection and Analysis, Preparation and Action Plan	–
Oacland (2003)	Plan, Collect, Analyze, Adapt and Review	–
APQC (2000)	Plan, Collect, Analyze and Adapt	–

From the above table, it is very clear that the benchmarking process has not got standardized. It depends on the situation, complexity and strategy under consideration. Another benchmarking process is presented here that is more elementary but informative for those who are not familiar with the benchmarking process and have no previous experiences.

23.10 The Five-stage Benchmarking Process

The five-stage benchmarking process presents the functions into five consecutive stages put together. Here, some guidelines are also given in each stage so that the model developed on the basis of this process becomes all inclusive. If any of the important function is missed at

the time of process or model development, it will hinder the successful implementation of the process or model. Thus, at the development stage, sufficient care should be deployed for making it an exclusive one.

23.10.1 Stage 1: Planning the Benchmarking Project

Any benchmarking process starts with planning to determine what to benchmark and against whom to benchmark. A careful home exercise should be initiated to reach to the optimal decision at this point which involves a lot of money, time, effort and commitment. This plan should fit within the mosaic of the company-wide quality plan, which, in turn, should be integrated with the strategic business plan. The planning process formally starts with the identification of the strategic intent of the business unit or process being benchmarked. A business process can be defined as sequences of activities that people perform on inputs to produce outputs.

Usually, a business has a mission statement that summarizes its major purpose. Deliverable expectations of customers of the business unit or business process are derived from the mission statement. For example, typical strategic deliverables of, say, a logistics function might include:

i. The level of customer satisfaction expected
ii. The inventory level to be maintained or returns to be achieved
iii. Delivery times to be achieved
iv. Delivery of goods as specified
v. The unit cost or cost level to be achieved

The objective is not only to ensure that the logical deliverables of the business unit are benchmarked, but also the perceived future problem areas identified.

Identification of the process that is to be benchmarked is another difficulty that is answered in this stage. Whether something should be benchmarked depends very heavily on how important is the process in the internal supplier/customer chain or in satisfying end users or consumer needs. How significant is the problem to be benchmarked in relation to other areas where benchmarking resources could be directed? Will your customers notice the difference if you implement best practice for this business process? Will they change their behaviour

Companies Often Used as Benchmarks

1. Florida Power & Light (Quality Management)
2. L.L. Bean (Logistics)
3. Hewlett-Packard (Research & Development)
4. Fuji Xerox (Total Quality Management)
5. Saturn (Engineering)
6. Microsoft (Marketing)
7. Xerox (Customer Satisfaction)
8. Honda (Suppliers Partnerships)

Source: *Benchmarking: The Search for Best Practices that Lead to Superior Performance* by Robert C. Camp

significantly enough to make a visible impact on the results of the organization? If the answer to any of these questions is no, the subject for benchmarking may be something important but not important enough.

The key to determining what to benchmark is to identify the output or outcomes or product of the business unit. The product may not be readily apparent. In a manufacturing operation the output is almost always a physical, visible, quantifiable product. It can be seen, measured and compared with other competing products. But what is the product of a business unit that provides a service? We need to identify who wants this product. Who is the customer? Then it is time to identify the processes' and customers' profiles and set of expectations.

The customer is the individual or group with a critical need. The customer's expectations drive the identification of the products, services or processes to be benchmarked, the specific kinds of information required and the specific companies or types of companies that should be included in the benchmarking investigation. They also establish the time frame. Finally, Stage 1 is completed by selecting the critical success factors (CSFs) to benchmark. The following is a list of CSFs that must be addressed if an organization is to have a productive benchmarking process:

1. Top management must actively lead and support the benchmarking process.
2. Benchmarking must be defined correctly. It is not just comparative analysis.
3. Resources must be set aside for benchmarking.
4. Projects need to be prioritized and competitive areas addressed first.
5. The organization must have a comprehensive understanding of how its item functions and performs before it approaches benchmarking partners.
6. The benchmarking process must be focused on implementing the future state solution, not on collecting and analyzing data.
7. There must be a commitment to a continuous, ongoing benchmarking effort that makes it part of the management process, not a 'flavour of the month'.
8. At a minimum, all managers and key support personnel need to understand the benchmarking process.
9. Results must be measured in a way that evaluates the benchmarking effort's impact on the bottom line.
10. Benchmarking projects must apply organizational change management concepts to the target areas from the beginning of a project and continually apply them after the future state solution is implemented.
11. Benchmarking item teams (BITs) must develop a specific and realistic action plan.
12. The organization must embrace change as a way of life.
13. Benchmarking projects should be embedded into each function's yearly business plans, and the improvements should be reflected in future budget.
14. Management must select BIT members who can implement the results of the benchmarking study.
15. Management and BIT members should be measured on how they will use the benchmarking process.
16. The organization needs to develop an attitude of questioning why it must be 'invented here'.
17. The organization must realize that the outside world is changing rapidly, so improvement efforts must be directed at being better than today's best.
18. Critical business processes must be identified and improved.
19. Creativity, innovativeness and new ideas must be required of all employees. All efforts must be encouraged. Even noble failure should be rewarded.

20. The organization must be willing to share information with internal and external benchmarking partners.
21. Each benchmarking partner must be selected carefully to make sure it is truly the best and not just an organization that presents a great story.
22. Benchmarking should be used as a way to make good items better or the best, not only as a way to correct problems or help the organization when it has its 'back to the wall'.
23. Benchmarking results need to be translated into return-on-investment figures.
24. The organization needs to establish a balanced scorecard measurement system early in the benchmarking process.
25. A reward-and-recognition system that reinforces desired behaviour needs to be established.
26. Line management needs to accept responsibility for driving the benchmarking process at the item level. Managers should also be measured on how well they meet this responsibility.
27. The benchmarking process must focus first on industry-best practices and next on performance measurements.
28. Organizations should not accept a single benchmarking partner's approach. They should try to combine the best concepts and practices of all the benchmarking partners. This approach allows the organization's item to leapfrog the pack.
29. The benchmarking process should be applied to organizations outside the industry, as well as to competitors.
30. Benchmarks must be updated regularly, and the benchmarking process must be improved on an ongoing basis.

These are the major factors which must be dealt exceedingly well if the enterprise is to be really successful. Choose a business process or processes based on these factors. Then once the key issues about the performance of that process are known, choose the few key performance indicators of CSFs that you believe measure these key aspects of process performance. The integration of benchmarking with other types of total quality tools is one of the greatest opportunities to link CSFs with meaningful business results. The more specific and generic CSFs, the more likely you will be provided with relevant information by your benchmark partners.

There are three levels of CSFs:

Level 1 defines a broad subject area involving an organizational department or function, for example, approaching a benchmark partner on, say, billing is too broad a range.

Level 2 defines a more specific investigation. It can be defined by some type of aggregate measure, for example, number of billing errors.

Level 3 is the most specific level that can be defined particularly by means of some type of measure or specific process description that allows benchmarking partners to produce information comparable to your own, for example, billing errors may involve incorrect invoices or incorrect billing addresses.

23.10.2. Stage 2: Form the Benchmarking Team

The selection of benchmarking team members is a difficult job. They make the benchmarking process lively and make it a success. Thus, the main objective of this stage is to select, train and manage the benchmarking team. Benchmarking exercises can be conducted by individuals, but most benchmarking exercises are team activities. A team represents the different perspectives, special skills, variety of business connections the individuals bring to the benchmarking process. The word 'team' has connotations of common purpose or goal,

co-ordination, co-operation, communication and motivation. The team structure will be influenced by the size and scope of the benchmarking exercise which will depend on a number of factors such as:

1. The size of the organization
2. How much the organization is prepared to spend?
3. How many business processes it will benchmark?
4. How many locations the organization operates from and wishes to benchmark at one time?

Team building is thus very important and dependable on the factors as outlined above. But, the target is to develop a strong team considering all limiting factors with members from heterogeneous background to make it capable of handling any situations ahead. Any benchmarking project will thus require:

1. A small group of people to outline the scope of the project at the beginning and provide leadership and co-ordination through to the end
2. Wide involvement from a number of people with varied skills once the scope of the project has been decided
3. The preparedness to cope with the absence of people involved in the benchmarking exercise from day-to-day business.

The team members may be grouped in small to form some subgroups with specific defined jobs. It will be helpful to devise authority–responsibility relationship among the members so that no contradiction arises among the members. Literature presents the existence of three types of teams required for a benchmarking exercise as presented in Table 23.3.

Table 23.3 Benchmarking Team

1.	**The Lead Team**	
	Objective	building and maintaining commitment for the benchmarking process throughout the organization
	Duties	providing leadership in decisions on the particular areas of focus facilitating the selection of preparation teams and visit teams
		managing the process to achieve targets on time and within budget
		integrating the benchmarking process with other improvement initiatives being planned or currently in operation
	Composition	any consultative committee or some modified version of it already in existence
		the quality committee or some modified version of it, if a TQM programme is in existence
		a cross section of functional skills to enable a broad view of the organization
		direct workforce representation to represent views, counter any fears and gain commitment at the earliest stage possible
		people with authority to take the necessary decisions regarding the benchmarking project and its integration with other improvement initiatives

(Continued)

(Continued)

2.	**The Preparation Team**	
	Objective	Converting the benchmarking into a success within the scope defined by the lead team
	Duties	to work within the scope defined by the lead team, on a single business process
		to carry out the detailed analysis and preparation
		to help to identify partners
		to have representation on the benchmarking visits
		to analyze findings and design improvement projects
	Composition	the 'natural work team' of the process in question
		the entire work group including people from support functions
		suppliers and customers (external and internal)
3.	**The Visit Team**	
	Objective	Making a bridge between the preparation team and the benchmarking partner in the field and policy level as well.
	Duties	to carry out the benchmarking visit within the scope defined by the preparation
		to deliver the findings to the preparation team to implement
	Composition	members of the preparation team

Source: Authors own.

Of course, the lead team, preparation team and the visit team can be identical in their composition. The important thing is to recognize the different roles and ensure that they are carried out. Sometimes the team member may require training with a view to:

1. Educate them in the benchmarking process
2. Train them as necessary in the use of analytical tools and techniques
3. Train them as necessary in interpersonal skills such as leadership skills, facilitation skills and basic project management skills
4. Train them in questioning techniques
5. Familiarize them with company background and systems and so on if necessary.

23.10.3. Stage 3: Collect the Necessary Data

Once team members are selected and trained, the field activities will start with setting the methodologies of data collection and then with the collection of data. The basic objective at this stage is to identify best practice companies to gather benchmarking information about the performances and practices of the best practice companies. Collecting comparable data from the internal database is also important. Self-analysis is an essential step to effective benchmarking. One of the fundamental rules of benchmarking is to know your own processes, products and services before you attempt to understand the processes, products and services of another organization. Because without a thorough inventory of your own internal products and processes you may not realize the extent of your improvement opportunities; because

without an accurate understanding of yourself, how can you calculate the potential gap that exists between your outcomes or activities and those of the best practice organizations you wish to benchmark; because without a thorough internal analysis you may be bypassing some important internal benchmarking opportunities.

To identify how you currently perform the process, collect and review any information already available on the process. This may include:

1. Flow charts: This involves taking the process to be analyzed and drawing up a diagram to show each step in the process. This is useful to understand the process and its drivers.
2. Customer feedback: This involves identifying customers and their needs to assess whether the process is performing well or not. Customers can be asked direct or by formal customer survey. Answers to these questions can give clear indications as to what aspects of the process should receive priority.
3. Measurements of the process, for example, unit times, volumes/frequencies.
4. Procedure manuals.

Collect similar information from the database of the benchmarking partner. A benchmarking partner is any person or organization that supplies you with information relating to your benchmarking exercise. The term partner implies an ally or one who enters into an association with you. This step can proceed in parallel with your self-analysis step. There are a number of ways to find a benchmarking partner including:

1. Literature sources can be helpful especially if your search is international.
2. Trade and professional associations can be useful particularly if you have decided that your potential benchmark partners are likely to come from a particular industry or service sector.
3. Consultants may have databases of best practices and best practice organizations. They can also act as a third party.
4. Stockbrokers may provide some specific information such as background and structure of the potential benchmark partners.
5. Major suppliers of your machinery, process technology and materials can be sources of specific information regarding the potential benchmark partners.
6. Major customers.

The selection of benchmarking partners is critical as it will determine the process comparability and the potential for quantum leap change. After the selection of the benchmarking partner, the site visit is planned and initiated to collect necessary data as agreed upon.

The Site Visit

Site visits are important to gain an in-depth understanding of the systems and processes of the best practice companies you have chosen as benchmarking partners. Site visit should be wisely planned as you are planning to collect competitive information from the partner. Following steps may be followed as guideline:

1. Send letter to quality director, manager of area you wish to visit or head of the human resources function.
2. Follow up with phone call to explain the reason for the project and its objectives, and to indicate the business process and issues that are the focus of your project.

3. Obtain agreement from target partner on the conditions of the project.
4. Plan the visit.
5. Develop site visit strategy and questionnaire.
6. Conduct the visit in a professional manner. Be sure to stick to the agenda. The objective of the visit is to get answers to your questions; it is not a social event.
7. Return some value to your host. It is usual to exchange information during benchmarking visits.
8. Feedback to host company, thanks and so on.

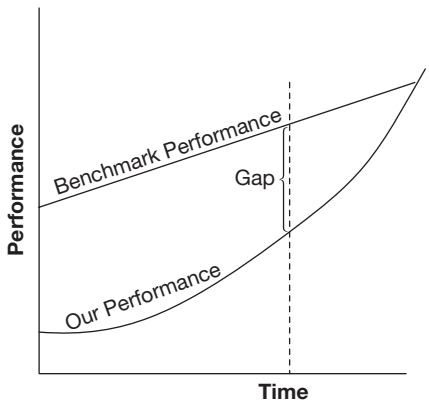
23.10.4. Stage 4: Analyzing the Data for Performance Gaps

Performance gap (Figure 23.4) is the deviation from the performance score of benchmarking partner in respect of each parameter. This deviation ultimately indicates your current status, how far you are from your partner. It will also give you some indication on how smooth your journey will be in the process of benchmarking.

Thus, the main objective of this stage is to identify and analyze the gaps that exist between best practice and your own business processes. All the collected information is used to identify performance gaps between benchmarking partners. When comparing the performance of companies, adjustments must be made for differences due to:

1. Economies of scale
2. Different management philosophies (outsourcing, decentralization)
3. Product features and manufacturing processes
4. Operating environment (differing awards, regulatory constraints)

Figure 23.4 Performance Gaps



Source: Authors.

This stage results in important information for you. You may have to develop a composite picture that reflects the input of many companies. Synthesize the process information you have gathered in a way that is appropriate for your company's culture. This is your opportunity to compare your current performance against the benchmark you have discovered. You can then identify performance gaps and their causes.

23.10.5. Stage 5: Take Action and Recycle the Process

This stage reflects the reaction against the performance gap. Main objective of this stage is to develop strategies and action plans to close the gaps. If the gap is very significant, this stage becomes very challenging. What needs to be done to match best practice for this process? Identify tasks, responsibilities, resources and time targets for the change process. Prepare a budget and a cost benefit analysis, and put it into practice. Monitor performance indicators carefully as these should highlight improved efficiencies. This recycling process should continue until the target is achieved. If there is a possibility of changing benchmarking partner, the full process will be applied in different scenarios. Thus, this process is never ending until you become market leader and target of all others for possible benchmarking partner.

23.11 National Productivity Corporation (NPC) Benchmarking Model

Benchmarking can be undertaken as a structured process. The structure is best provided by the development of a step by step model. There are different models of the benchmarking process. They vary in complexity from 4 steps to 30 steps. No matter what terms they use, close scrutiny reveals that they all revolve around four basic stages or phases: planning, data collection, data analysis and action. The NPC benchmarking model (Figure 23.5) described here is a synthesis of these various models. This model was developed by NPC, Malaysia in 1998. It incorporates all the steps which have been found to characterize successful benchmarking programmes in leading organizations. The schematic view of the model has been presented further followed by a detail discussion.

The model comprises 14 steps arranged in 3 phases. The first two phases are for planning and analysis. The third phase is for action or implementing the best practices identified. The final phase also embraced reviewing the benchmarking project. It is important to note that in the model, constant monitoring and feedback take place throughout the benchmarking process. The model is consistent with various definitions on benchmarking, amongst others, benchmarking as a continuous process. As such, the model follows the plan-do-check-act (PDCA) cycle.

23.11.1. Phase 1

Phase 1, the plan phase, focuses on the various upfront decisions such as the selection of functions/process to benchmark and the type of benchmarking study on which to benchmark.

Participating organizations delve in a self-study to characterize the selected processes using matrices and documenting their business practices. The share–strength session is also held to enable participating organizations to learn, comparatively speaking, in which particular areas they can improve and also to identify those partners who have already grappled with, and overcome similar problems and are willing to share their ideas.

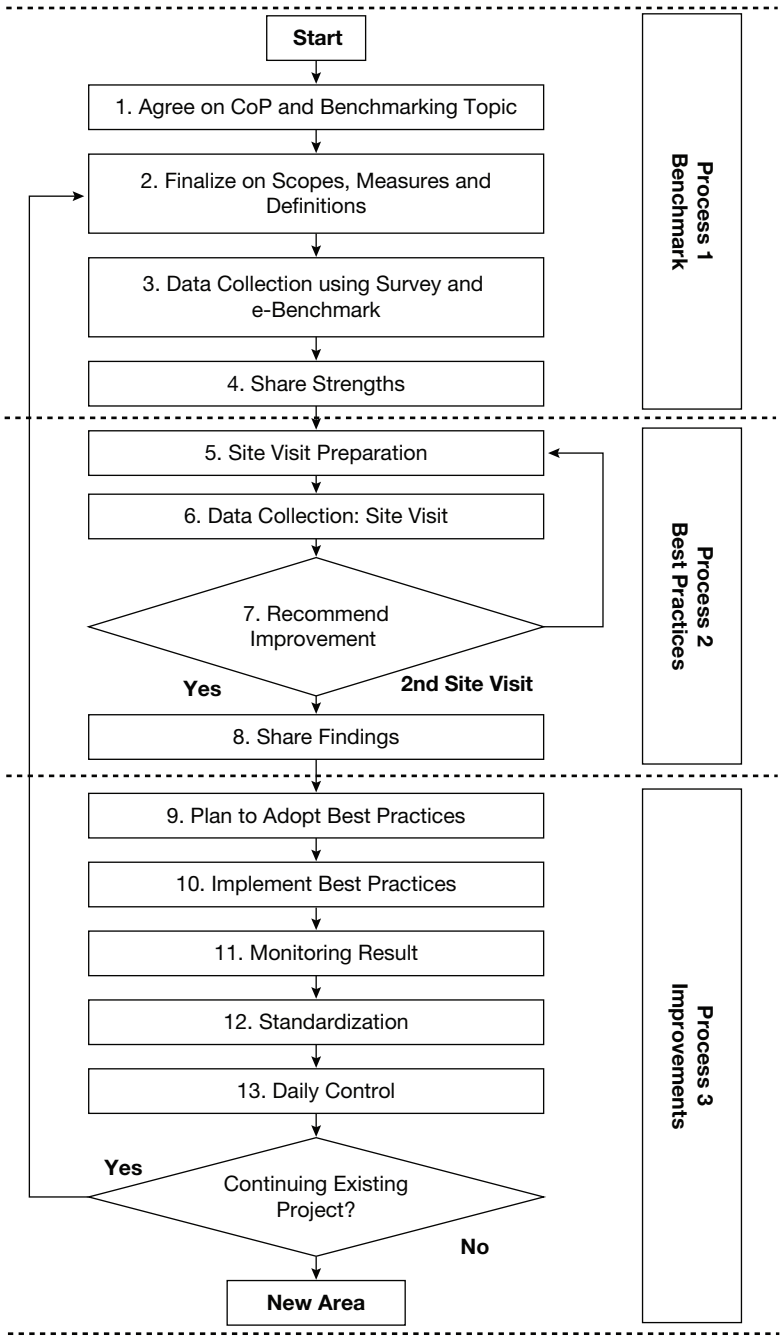
23.11.2. Phase 2

Phase 2 involves training the benchmarking teams in each of the organizations to equip them with the necessary skills and knowledge of benchmarking. The benchmarking teams are not only responsible for investigating improvement opportunities but also organize site visits to the best performers in the particular process they have selected. The teams are required to report their findings pertaining to their investigation whether negative or positive gaps exist between the benchmarking company and benchmarking partner(s). They then proceed to recommend actions in order to close negative gaps or maintain positive gaps.

23.11.3. Phase 3

In this phase, NPC facilitates organizations' adaptation and implementation of the best-practice findings arising from the benchmarking project. The key skill in this phase is change management. The improvement teams will be trained to ensure constant monitoring and measurement of results to determine whether the process is improving. Regular review of contingency plans and deadlines along with documentation of progress and standardization are essential to maintain momentum and provide impetus for upcoming benchmarking study.

Figure 23.5 NPC Benchmarking Model



Source: Authors.

23.11.4. Basis for Using NPC Model

The NPC Benchmarking Model provides an adequate framework for successful planning and execution of any benchmarking exercise. It enables the companies to see where they are going and how they are going to get there. It also provides a common process in a language understandable to all. Since the model provides the basic framework of action, all types of variations are possible within the model framework. The process can be tailored to fit the specific requirements of individuals, groups and organizations.

23.12 Benchmarking Through Community of Practices (CoP)

CoP is a network of individuals or organizations within similar or dissimilar industries who share some common areas of interest. Members of a CoP are grouped together on a voluntary basis to initiate some form of benchmarking activities, where NPC serves as the facilitator. The main purpose of setting up CoP is that members would be able to share benchmarks and best practices in common areas of interest.

NPC is continuously providing avenue for organizations to exchange knowledge on benchmarks and best practices through e-Benchmark and Broadcast Pix (BP) net to CoP members. The e-Benchmark system facilitates members in obtaining real-time competitive scores and ranking while BP net is developed to encourage discussion and more effective sharing of best practices. These tools would expedite the process of sharing among the members of the CoP.

NPC worked closely with other institutions and the trade and service associations such as Federation of Malaysian Manufacturers, Malaysia Retailers Association, Pusat Tenaga Malaysia, Malaysian Employers Federation, Asian Productivity Organization and other relevant agencies as the intermediaries to promote benchmarking to the potential companies.

A series of seminars have also been organized to create awareness and ultimately will lead to forming a new CoP in targeted industries. Once the CoP is formed, members need to select the focus areas to benchmark. Several meetings will be conducted to finalize on scope and measures.

After they identified the scope and the appropriate measurements, common understanding and consensus on the definition is important to ensure meaningful comparison among the members.

The e-Benchmark system provided by NPC is to speed up the data collection and computation of benchmarks. This system allows members to conveniently key in data, compute indicators, rank performance and benchmark comparisons, all within a submission using the Internet. Confidentiality of organization's data is secured through the use of a password.

The e-Benchmark system generates two types of reports: competitive scores and ranking report.

The competitive scores report presents in terms of minimum, medium and maximum of the community's performance against the organization's own performance while the ranking report highlighted the organization's position against CoP members. A seminar to share the e-Benchmark findings will be organized upon completion and analysis of the benchmarking reports. During the seminar, there will be an exchange and more in-depth discussion on the findings. The exemplary performers or best practice organizations will share their strengths on how they have achieved the benchmark performance. All participating members could exchange experiences and share their strengths and opportunities in this seminar. Subsequently, members would be interested to know more about the best practices of these benchmark

organizations. This takes the CoP to learn more by visiting the benchmark organizations. The face-to-face interview provides members the chance to get acquainted with the atmosphere, environment and culture in which the organization is operating.

The next stage of benchmarking for best practices project is to share the best practices implemented by the 'best-in-class' organization. NPC also issued password to each of the member for them to access into BP Net that allows the capture, dissemination and sharing of knowledge and best practices information that provides a culture of continuous learning, innovation and improvement. Benchmarking process is only complete when members take learning back to their organization. They need to plan to adapt the best practices from observations learnt during the site visits and experiences shared during the session on sharing of best practices findings. The proposed improvements recommended should be implemented for continuous improvement, which is the very essence of benchmarking. It is important to establish detailed action plans and accountability for identified improvements.

23.13 Cost Management in Benchmarking

Benchmarking is a process that is costly. Thus, cost management in benchmarking is very important. At the very outset of the benchmarking process a careful identification of different categories of cost, volume of costs and expected benefits out of the benchmarking process should be evaluated. Benchmarking process results future courses of action that again deals with cost reduction strategies. Thus, benchmarking itself is used as a cost management technique. However, before presenting benchmarking as a cost management technique, let us get familiar with different costs required for having benchmarking in action.

23.13.1. Cost of Benchmarking

Benchmarking is a moderately expensive process, but most organizations find that it brings more than it pays if becomes successful. The costs related to benchmarking process can broadly be categorized into three categories, as follows:

Cost of Visiting the Site: A field visit is an important part of benchmarking process. Such field visit requires costs for accommodation, traveling, meals, a token gift and lost labour time.

Cost of Time Deployed: It requires commitment and good amount of time deployed by the members of the benchmarking team to make the benchmarking process a success. Most of the time goes for researching problems, finding exceptional companies to study, visits and implementation. This will take them away from their regular tasks for part of each day that may require additional staff.

Costs of Maintenance of Database: Organizations that institutionalize benchmarking into their daily procedures find it useful to create and maintain a database of best practices and the companies associated with each best practice for further reference. Because benchmarking is a continuous process that results different findings each time and needs adjustments.

The cost of benchmarking can substantially be reduced through utilizing the many Internet resources that have sprung up over the last few years. The aim is to capture benchmarks and best practices from organizations, business sectors and countries to make the benchmarking process much quicker and cheaper.

23.13.2 Benchmarking and Key Cost Variables

Benchmarking can be used as an important strategy for cost and quality improvements. The functions, activities and processes can be measured in terms of specific output measures of operations and performance. Swift et al. (1998) evolved two broad categories of cost variables which can be effectively benchmarked in order to attain improved cost efficiency and cost effectiveness.

These two categories are as follows:

1. **Cost and Productivity:** Overhead costs and labour efficiency, total cost per unit and direct labour per unit are some of the vital cost drivers which result in a very high proportion of expenditure in any production process. These variables provide an excellent platform for benchmarking and enable an organization to become cost efficient. Comparing one company's financial statements and cost breakdowns against those of others is an effective strategy to improve especially when you are comparing with a detailed financial statement of your competitors or the best-in-class.
2. **Business Processes:** It includes all those processes which are not directly related to product design, production, sales and service. Human resources, data processing, accounts receivables, marketing services, security warehousing and public relation are some of the key variables in this segment. A number of companies develop severe cash flow and profit problems due to uncontrolled cost of these business or support processes. All these costs can be grouped under general and administration expenses and these expenditures have tremendous scope of improvement through benchmarking.

23.13.3 Cost Management Technique in Benchmarking

Producing and providing quality product at a competitive price is the only target for today's customer. They are very much quality conscious and at the same time like to pay as less as possible. And in the market, you have to be in the same race where others have already won. Thus, most of the benchmarking process ends with either attacking some cost categories directly or improving some processes for increasing productivity. Some of the cost management techniques directly address these issues. A brief presentation is given next as a detail discussion of each of the items is provided in relevant chapters.

1. **Activity-based Costing:** In traditional cost accounting, the identification and allocation of costs in most of the cases goes wrong resulting distortion in pricing. To solve the problem, activity-based costing goes for a detailed activity analysis with the identification of relevant activity drivers that helps to trace costs with the product rightly. And thus products are rightly priced. Activity-based costing makes the pricing process rationale and provides management with additional information, say, resource consumption rate that may be used for process improvement.
2. **Target Costing:** Target costing is very effective for controlling costs where a targeted level of costs is required to be achieved. Such costing starts with market survey resulting revenues that market will generate. Then management sets the targeted profit; deducts the same from revenue and results targeted amount of costs. Then, these costs are allocated among different elements of costs.
3. **Product/Process Re-engineering:** Re-engineering is not new that is largely used to increase the productivity. The option of re-engineering will always be there due to the changes in technology. Each time, the newer technology outdates the older one and

new technological advancement brings easier and cost effective way of doing some existing processes. Thus, re-engineering improves the way of doing, increases productivity and reduces costs.

4. **Value Chain Analysis:** A reduction in costs is sometime brought by identification and discontinuance of non-value added activities. Value chain analysis helps a company to identify the existence of non-value added activities. If companies have non-value activities, then the production process becomes overburdened. Discarding non-value activities saves a lot of money against which no value is delivered to customers.

These points exemplify the situations when different cost management techniques can be deployed in benchmarking for improving the cost structure and composition of cost components. Customers will not pay for inefficiency, ineffectiveness and nothing.

23.14 Conclusion

Since the beginning of benchmarking in Xerox, it has become so popular in business management. When companies face trouble, they go for benchmarking. It seems like outsourcing best business plan from the market. But, a lot of technicalities are involved in benchmarking process. Identifying benchmarking partner, process to be benchmarked, benchmarking process, CSFs, cost management techniques involve a lot of complexities. Sometimes, companies depend on consultants who have long experiences with benchmarking. If company itself wants to do the benchmarking, it should take care of each element of benchmarking process.

The kind of benchmarking you should undertake is dependent on your company's characteristics and circumstances. Benchmarking has to be seen to be integral to the business strategy and not just an add-on. It should be based on some kind of critical need. And benchmarking should be a continuous process in your organization. As David Kearns, Chairman of the Xerox Corporation commented 'striving for best practice is like running in a race without a finish line.' Best practice constantly changes, and continuous benchmarking can help an organization identify what it needs to do in order to remain in the race.

Multiple Choice Questions

1. Improvement efforts are determined by
   a. Priorities for future output
   b. Criticality of problems
   c. Current performance
   d. All of the above

2. Performance measurement is
   a. The planning and control of operations
   b. The improvement of operations
   c. The process of quantifying action
   d. The determination of improvement efforts

3. Which kind of standards are those that are set arbitrarily to reflect some level of performance that is regarded as appropriate or reasonable?
   a. Target performance standards
   b. Historical standards
   c. Absolute performance standards
   d. Competitor performance standards

4. For a police department, using competitor performance standards, a competitor might be
   a. A fire service
   b. A similar police department
   c. A foreign police authority
   d. All of the above
5. What approach is used to compare organization operations with those of other companies?
   a. Benchmarking
   b. Competitor performance assessment
   c. SWOT analysis
   d. PERT analysis
6. The origins of benchmarking as it is used today go back to which company?
   a. Xerox
   b. McDonald's
   c. Microsoft
   d. Toyota
7. A comparison between operations or parts of operations that are within the same total organization is called:
   a. Internal benchmarking
   b. External benchmarking
   c. Non-competitive benchmarking
   d. Competitive benchmarking
8. Benchmarking against external organizations that do not compete directly in the same markets is called:
   a. Collaborative benchmarking
   b. Non-assault benchmarking
   c. Non-competitive benchmarking
   d. Practice benchmarking
9. Which of the following is regarded as a fundamental flaw in the whole concept of benchmarking?
   a. It limits improvements to currently accepted methods of operating
   b. It limits critical thinking
   c. It does not involve learning
   d. It is not a continuous process
10. What do the letter 'D' and 'I' stand for in Deming's cycle of improvement?
    a. Define and improve
    b. Design and improve
    c. Develop and implement
    d. Design and implement

Review Questions

1. What is benchmarking? Give a brief history of benchmarking.
2. What are the different types of benchmarking?
3. What are the advantages of benchmarking?
4. Explain the dangers of benchmarking.
5. Write a short note on benchmarking process.
6. What are the requirements of successful benchmarking?
7. Explain the following benchmarking process:
   a. Camp benchmarking process
   b. Five-stage benchmarking process
   c. NPC benchmarking model
8. Explain the use of cost management in benchmarking.

Case in Action

Austria Benchmarking: A Case

Introduction

After a continuous decline in both arrivals and overnight accommodation from 1992–1997, tourism really showed a return to form in 2000. This was somewhat blighted by the political fallout which the nation suffered following the election of a conservative government formed from a far right party in the same year. This led to the condemnation of Austria from Belgium, France, Germany and the European Union. Sanctions were imposed and later lifted in 2001.

Austria also had to deal with its developed destination status which, for many, suggested that it was somewhat old fashioned, and was certainly perceived negatively by the youth market. In an attempt to redress this, a number of marketing and promotion techniques have been undertaken.

Innovative Techniques to Develop a More Positive Image

The nomination of Graz as European city of culture has helped extend knowledge and appeal of Austria's city product beyond Vienna, which dominates in terms of urban tourism performance and short breaks.

Austrian Centres

Particularly, meritworthy is the development of Austria Centres (a combination of overseas tourism offices and the Austrian embassies commercial offices), which have been particularly successful in Berlin, Brussels, Tokyo and New York. They combine:

1. Tourism offices
2. Commercial embassy offices
3. Offices for Austrian companies
4. An Austrian restaurant
5. Austrian shops

Key manufacturers like Swarovski have been signed up for such developments, since they constitute acceptable overseas ambassadors for the country. Other brand partners include: Intersport, Yo Vital and Ford (for their world appeal and distribution). The extent to which they are profitable or return investment is invariably difficult to judge. The premises rental and initial development costs are primarily met by the AntriaBio (ANTB) and the return on investment is primarily via intangible results such as marketing impact, generating destination awareness and so on. Private participation details are limited and co-operation in the venture would appear to be more attractive during periods of positive economic growth.

The Internet

The portal website (www.austria-tourism.biz) gives access to a range of tourism services and particularly strong trade briefings focused on key overseas markets. Key niche markets beyond the traditional focus on the family include spa, beauty/fitness, golf, language training, lakes and mountains, climbing and trekking, equestrian breaks and city and culinary breaks. An interesting focus on the latter has led to the promotion of Austria as the delicatessen shop of Europe. This theme is heavily emphasized at the overseas Austria centres. The unifying emphasis in all cases is on quality. The German and Austrian

tourist offices have been working together to develop a number of mutually beneficial tourism routes combining around 19 of the 35 UNESCO world heritage sites utilizing Munich, Cologne and Vienna as 'hubs' for such itinerary development.

Health Tourism

Austria has worked hard to position itself as a world leader in health tourism as this important niche has shown growth potential. The Austrian National Tourist Office (ANTO) has taken action to promote the following key product development areas:

1. Brand development of 'Austria—Wellbeing Destination of Europe'
2. Strong marketing into the key German markets (where significant demand for spa and health tourism is already developed)
3. Quality assurance development around a 'seal of quality' distinctive logo
4. Development of a public/private company Wellbeing GmbH (Ltd) to drive forward this element of the tourism portfolio

Eco-tourism

This area of tourism has been developed around nature-based holidays (e.g., hiking, mountaineering, farm holidays, national park holidays and nature reserve holidays). Designated eco-regions have been prioritized for development. Key criteria include:

1. Marketing co-operation between agriculture and tourism
2. Density of organic farms
3. Variety of regional foodstuffs
4. Presence of national parks/nature/wildlife reserves
5. Developments in accordance with sustainable guidelines (as detailed in Agenda 21 Environmental Charter and Measures)
6. Climate protection measures

Eco-efficient Traffic Plans

Around 35%–40% of the Austrian landscape can match these criteria. Austria remains one of the four largest reserves of fresh water on the planet and has recently linked to the UN Year of Fresh Water 2003.

Measuring Destination Development

In terms of developing destinations within Austria the Destinations Management Monitor Austria is worth consideration. It was aimed at developing 14 destinations/regions to international levels of competitiveness over the period 2000–2003. It incorporates benchmarking, developing innovation in destination management and forming regional marketing networks. Market research was also an element of the programme, which was primarily federal government funded with participating regions contributing a minority-funding element. As an initiative, it is yet to be proven in terms of moving visitors away from honeypot areas. It is perhaps best understood as the response of a federal government to a heavily decentralized structure.

Source: http://www.visitscotland.org/print/research_and_statistics/other_research_reports/benchmarking_scotland/benchmark/austrianbenchmarking/austrianbenchmarkingcasestudy.htm

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Answer Key to Multiple Choice Questions

1. d	2. c	3. a	4. d	5. a	6. a	7. a	8. c	9. a	10. a