

Knowledge and Best Practice Management through Benchmarking: A Global Survey

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ABSTRACT

Developing best practice through benchmarking features as a critical activity in the business world as it is a vital approach for sharing and transferring knowledge. Companies across the globe have embraced these concepts but have done so with a varied level of success. Some have managed to create huge market place advantages whilst others have fared less favourably. The purpose of this research is to establish the level of benchmarking activity and application globally. The information gathered included both the hard and soft issues associated with benchmarking and following analysis, attempted to evaluate the level of benchmarking maturity reached across different industry fields and size of operation. This global survey helps understand what leads to effective benchmarking and development of best practices.

1.0 INTRODUCTION

In the last few decades, knowledge has accumulated and increased, innovations have been occurring at an unprecedented rate, competition for technology and markets has intensified, and customers are more educated and more demanding than ever. Change is affecting everyone and pushing organisations, and individuals, into a new world of collaboration, speed, and innovation. In such an environment, windows of opportunities open and close before many firms realise they had opened. Developments in many areas of life, which occurred at an astonishing pace in the last decade have produced a turbulent business environment for which the causes are global, technical, economical, and social. From a global perspective, the World Trade Organisation (WTO), preceded with the General Agreement on Tariffs and Trade (GATT), and the coming together of the European Economic

Community, are examples of the changes in regulatory and governmental roles that are resulting in a new competitive climate. Trade barriers are falling while transactions that cross international borders are rising sharply and financial markets are opening up rapidly.

The changes and rate of innovation in the IT area are the main drivers of the worldwide change, as well as the main enabler. The IT revolution came from parallel fast paced evolution in hardware, software, networks, workstations, robotics, and smart chips. IT has recently delivered the Internet, the effects of which have been tremendous, but the true potential is yet to be discovered. Businesses in virtually every industry are finding ways to reinvent themselves as e-businesses. They are adapting to changing cost structures, the free flow of information across and between enterprises, new value chains, or even completely new ways of designing, manufacturing, selling, delivering and servicing products.

Competition has also changed and intensified as mergers and acquisitions have escalated while traditional industry barriers are going away. This is creating a few huge players in some industries, while other smaller, more nimble players are moving to take advantage of niche areas and regional markets. Moreover, nowadays, competition is now international, and just one superior performer (be it Japanese, German, British, etc.) can raise the competitive threshold worldwide.

In the last decade, the world has witnessed a shift of power, and the myth that 'customers are all alike', created by mass production and marketing has rightfully come to an end. It came about because 'there was no other choice'; but now there are choices and customers have easy access to more data.

Computers, television, or daily newspapers can give a customer enough data to compare prices, quality, and services all over the world. These technological developments have caused a substantial increase in customer knowledge, and customers now have heightened expectations regarding the quality of products and services. Quality is already built into their perception of value, and these expectations will continue to increase daily on a global basis. Harrington and Harrington (1996) state that: *“With intense competition in industry today, simply meeting or beating past performance will not result in the level of improvement necessary to remain competitive.”*

Today, organisations deal with vertical integration, mergers, new technologies, diagnosis related groups, stockless or just-in-time distribution, captivated contracts, preferred provider organisations, total quality management (TQM), continuous improvement, business reengineering, and so forth. To survive into the next decade, organisations need to re-think their structures, products, processes, and markets. They must re-establish themselves to be quicker to market, customer focused, innovative, nimble, flexible, and be able to handle rapid change. This can only be achieved by continuously learning from others, benchmarking one’s performance with the world’s best, establishing a knowledge management (KM) infrastructure to capitalise on and transfer best practices, adapting the new best practice, and innovating to become world class. This type of copying, adapting, and learning from other’s best practices is not only becoming legal and ethical, but virtually mandatory for future success.

2.0 DEFINING BENCHMARKING

According to the American Productivity and Quality Centre (APQC), benchmarking describes the process of improving performance through continuous identification, understanding and adapting outstanding practices and process found inside and outside the organisation and implementing the results. Several definitions have been offered for benchmarking. Zairi (1996) defines it as *“emulating the best by continuously implementing change and measuring performance”*. Camp (1989) describes it as *“the search for industry best practices that lead to superior performance”*. The European Foundation for Quality Management (EFQM) defines it as:

“The process of systematically comparing your own organisational structure, processes and performance against those of good practice organisations globally, with a view to achieve business excellence. Benchmarking provides the key interface between identifying and understanding the key criteria for change and attuning these to the reality of specific organisations in the global economy”

Benchmarking operates on a simple fact, “whatever the process (supply or production or sales or services) some organisations are already achieving world-class performance” (APQC2, 1996). When ICL wanted to improve its distribution system, it benchmarked with Marks and Spencer. When Motorola was trying to speed the delivery process of its cellular phones, it paid visits to Domino’s Pizza and Federal Express (Holligns, 1992).

These best-in-class performers set a benchmark. A benchmark is the standard of excellence against which to measure and compare. Benchmarks are performance measures: how many? how quickly? how high? How low? (APQC1, 1999). Establishing benchmarks is a necessary part of benchmarking but of itself does not provide an understanding of best practices nor does knowledge of the benchmarks lead necessarily to improvement (Codling, 1991). Benchmarks are facts; benchmarking enables real improvement (APQC1, 1999). Benchmarking is actually the process of learning lessons about how best performance is accomplished. That is why experienced benchmarkers refer to best-in-class organisations as having ‘best practice’ not ‘best performance’ (APQC2, 1996). Benchmarking focuses on how to improve any given business process by exploiting ‘best practices’ rather than merely measuring the best performance. Best practices are the cause of best performance (APQC2, 1996). Benchmarking is action. Discovering the specific practices responsible for high performance, understanding how these practices work, an adapting and applying them to the organisation (APQC1, 1999).

The four main areas for finding best practices are internal benchmarking (comparing site to site, department to department), competitor benchmarking, functional benchmarking (compare yourself to the best organisations

operating in similar fields or performing similar activities), generic benchmarking (comparing ourselves against the best from all industry groups) (Hollings, 1992).

Benefits of Benchmarking

Throughout the last decade, many have presented what they noted to be the benefits of benchmarking. These accounts relied on a theoretical basis and case studies and were performance-based. The following is a list of the benefits of that benchmarking has been achieved so far for many successful organisations (APQC1, 1999; APQC2, 1996; Camp, 1998; Zairi, 1996).

Operational benefits

- Prevents reinventing the wheel (why waste time if someone has done it already?)
- Leads to 'outside the box' ideas by looking for ways to improve outside one's own organisation.
- Process improvement. Benchmarking forces organisations to examine present processes, which often leads to improvement in and of itself.
- Accelerates change and restructuring by: using tested and proven methods; convincing sceptics who can see it works; and overcoming inertia and complacency and creating a sense of urgency when gaps are revealed. Moreover, it makes implementation more likely because of involvement of process owner.
- Allows the organisation to focus externally and constantly capture opportunities and counter potential threats. To anticipate and head off new competitors. If goals are set based on current industry standards, a virtual competitor may move in and change the rules. Dell Computer rocked the personal computer industry when it successfully adopted mail order as a sales and distribution channel. Mail order was not a new idea in other industries, but it fundamentally transformed computer sales and set off a wave of competition in the last three years that is shaking one-time leaders to their foundations.
- Helps prevent organisational and people complacency. Benchmarking sets stretch goals. Inertia and past success leads many organisations to plan for the future in similar patterns. Without some external

stimulus and example, the goals for improvement are likely to be "the same as last year...plus 5 percent." Stretch goals based on believable external evidence, not only of results but the process that produced those results, are believable and give people a model from which to work.

Cultural benefits

- Promotes emergence and evolution of a 'learning culture' throughout the organisation.
- Promotes customer focused culture by constantly reminding people of the customer by focusing on critical processes and value adding contributions.
- To overcome NIH (Not Invented Here). Benchmarking offers evidence, not theory, that ideas NIH can work. This helps to convince sceptics, overcome resisters, and convert fence sitters-increasing the odds of making new and large changes.
- The following table demonstrates the perceived beneficial effects of benchmarking on organisational culture and the positive shift it causes.

Financial Benefits

In actual financial terms, benchmarking can provide tremendous leverage. A study by the America Productivity and Quality Centre (APQC2, 1996) found that more than 30 organisations reported an average of \$76 million for the first year payback from their most successful benchmarking project. Among the most experienced benchmarkers, the average payback soared to \$189 million.

Benchmarking Evolution

A lot of commentators have suggested a variety of origins of the concept of benchmarking (Bendell et al., 1988; Bogan and English, 1994; Camp, 1989; Codling, 1992; Watson, 1993; Zairi, 1996). However, it was not until Xerox started using a process of learning from its Japanese partner in the late 1970s and early 1980s that the modern concept gained prominence (Zairi and Ahmed, 1999). Benchmarking was pioneered in the 70s when Xerox saw its market share plummet as a result of Japanese competition (Japanese copiers where 10 times cheaper). Rather than seek protection or go to drastic cost reduction, Xerox benchmarked the Japanese, adapted their processes and survived and thrived in the copier

business (Grayson, 1992). Having succeeded at that, Xerox realised this approach need not be restricted to the manufacturing area nor to competitors, and so started looking at the best-in-class companies to learn how they undertook different processes.

For the next ten years most of the efforts in benchmarking focused on trying to overcome the 'apples and pears' issues of comparability. It is only in recent years that companies have recognised that focusing simply on performance measures and metrics leads to frustration because even if the 'apples and pears' issues are resolved it is not clear as to how the leading performer achieves that performance.

Benchmarking concepts started to grow and organisations started taking notice all over the Western World. In 1991, a study in the UK (Codling, 1991) revealed that:

“best practice benchmarking is little known as a management technique in Britain, and a general lack of awareness was revealed by the survey. However, interest was growing rapidly and benchmarking uses were becoming more widespread and varied. The survey also revealed that most UK organisations who do undertake benchmarking are still following internal benchmarking or external competitor benchmarking. Very few were found to undertake best practice benchmarking (any sector)”

In the same year, APQC created an 'International Benchmarking Clearinghouse' whose main purpose was to help individuals and organisations (in any nation) to benchmark more efficiently and effectively (Grayson, 1992). Similarly, EFQM launched its 'best practice benchmarking programme' (Rogers, 1991). These steps were some sort of official recognition of the powerful potential of benchmarking, and were indicators that the concept has developed into a clear methodology throughout the 80's. However, although the main concept seemed to spread, the proper methodology still seemed to pose problems for many. In 1992, Grayson (Grayson, 1992) noted that *“Even though benchmarking is now being recognised as the key to increased competitive edge, many companies are still confused as to how, why and whom to benchmark”*.

This was stressed by Holligns (1992) who noted that:

“Benchmarking is one of those terms that is becoming part of normal management language. No longer is it a term familiar only to TQM 'experts'. However, it is still greatly misunderstood. Many organisations think that they are benchmarking when, in reality, they are simply assessing performance – either their own or some other organisation's.”

So it is clear that benchmarking was becoming a very 'hot' management topic in the early 90's. That period also witnessed a boom in other management topics like 'TQM', 'BPR', and naturally researchers started questioning their relation to benchmarking. Saxl (1992) asked the question, how does benchmarking relate to other programmes? Is it part of TQM, complementary, replacement? Up to this time, i.e. 1992, all benchmarking seemed to have relied on various sources for information from literature, case studies, interviews, site visits, and so on Saxl (1992). Networking is probably the only one missing and was brought about by the power of the net in a later period. However, although the 'tools' for gathering benchmarking data have seemingly reached a mature level by then, still from the literature available, there seemed to be more focus on detecting the best measures rather than on studying and adapting the best practices that created them (Saxl, 1992). For example, Wilkerson et al. (1992) still discussed benchmarking as a primarily measurement tool to help establish goals.

In 1993, the growth and maturity of benchmarking were still on the rise but remained under to most followers Price Waterhouse conducted a study then that revealed that *“fewer than 30% of out top 200 companies carry out benchmarking as a regular management activity. Of these, 60% looked only within their industry”* (Price Waterhouse, 1993). Another study in the USA suggested that *“79% of CEO's recognised that benchmarking is critical, but 95% of them claimed they are not sure how to go about it”* (Price Waterhouse, 1993). Still, with this boom in awareness, the study concluded that *“Benchmarking will continue for many companies to become a regular management process”*. It also stresses that the methodology was becoming more focused:

“Benchmarking is about improving competitive position, and using 'best

practice' to stimulate radical innovation rather than seeking minor, incremental improvements on historic performance"

On the technical side, it was noted that the significant increase in the popularity of benchmarking has also seen a shift in its emphasis. While in the past it may have been the case to benchmark a product's tangible features, now it is more likely to major on value and business process (Price Waterhouse, 1993).

By the year 1994/1995, it was being shown without a doubt that benchmarking can provide tremendous leverage. A study by the American Productivity and Quality Center (APQC2, 1996) found that more than 30 organisations reported an average of \$76 million for the first year payback from their most successful benchmarking project. Among the most experienced benchmarkers, the average payback soared to \$189 million. In 1995, Fisher (1996) noted that the rapid increase in international competition was the result of technological advancement and access to information, mainly due to the spread of the internet, and stated that:

"as a result, companies can no longer afford to be inward looking and rely on their own collective, intellectual resources to survive. They must look outside and gather best practices from other companies if they are to remain competitive in a global market."

It was argued that global competition, quality awards, and breakthrough improvements were the key drivers for benchmarking (Fisher, 1996). 550 of 1000 total points in the MBNQA are influenced by benchmarking (APQC2, 1996). No other business concept, including process management, empowerment, employee motivation, cycle time reduction, strategic quality planning, new product development, or innovation yields such broad-reaching influence in the MBNQA criteria.

By now, Benchmarking was becoming acknowledged as one of the most effective techniques for identifying and optimising opportunities for implementing change to improve competitiveness (Codling, 1991). A survey conducted by Zairi and Sinclair (1995) found that benchmarking as a tool for competitiveness has become wide spread and has been used in one way or another by over 60% of the firms across all sectors. Whilst there

may be some debate about definitions, there is still sufficient evidence to suggest that benchmarking has reached maturity, in usage at least. The question about effectiveness of use is much more complex and little evidence exists to indicate how effectively benchmarking was being applied. It was emphasised that in this realm there was still considerable work left to be done (Zairi and Ahmed, 1999). Still, there was definitely better awareness of the 'art of benchmarking' and its application was spreading to encapsulate various organisational contexts, including non-profit making sectors such as health-care, the Army, and local government agencies, amongst others. Indeed, examples of benefits which may be derived from the use of benchmarking were in abundance, and ranged from cost reductions, time reductions, and quality improvements, to better awareness and new learning (Zairi, 1995). In a 1995 survey of The Benchmarking Exchange members, benchmarking was in the top five most popular business processes on which there is current focus. More than 70% of Fortune 500 companies use benchmarking on a regular basis, including AT&T, Eastman Kodak, Ford Motor, GM, IBM, Weyerhaeuser, and Xerox (Elmuti, 1998).

Around that same period, the CBI launched a benchmarking programme, which compared UK manufacturers to a database of over 800 European companies, PROBE (Promoting Business Excellence) (DTI, 1995). This grew out of the 'Made in Europe' studies and the associated explorations of best practice in the service sectors. In 1998, the Benchmarking Exchange (The Benchmarking Exchange, 1998) reported on the business processes that enjoyed the most focus in benchmarking activities every year (Table 1)

Business Processes	1998 Ranking	1997 Ranking
Benchmarking	1	3
Information Systems	2	2
Human resources	3	1
Process improvement / management	4	9
Customer Service	5	5

Table 1: Business Processes Enjoying Most Benchmarking Focus

Benchmarking has taken precedent for the first time. It is now appearing in corporate mission statements, employee development plans, and virtually everywhere a business process exists within an organisation. Only a few years ago the common home and responsibility for

Benchmarking resided in large corporations and driven by central office/department. Since then we have seen corporate offices 'let go' of the rigid control and allowed divisions and departments to charter their own Benchmarking course, although many will still provide assistance in terms of training, internal consulting, mentors, train-the-trainers and resource co-ordinators. The application of benchmarking is spreading to encapsulate various organisational contexts, including non-profit making sectors such as healthcare, the Army, and local government agencies, amongst others (Zairi, 1995). To emphasise this spread of benchmarking, Camp (1998) introduced a collection of 27 benchmarking case studies including cases from the US, Asia-Pacific, and Africa and South America for the major economic sectors: manufacturing, service, non-profit, government, and education. The processes are equally diverse: from oil-well casing delivery; successful improvement and change, coronary artery bypass surgery, complaint handling, and student advising.

Benchmarking is now well defined as a critical business process that is being continuously improved within most major organisations (Zairi, 1996). Benchmarking is not a policy but a tool to improve performance. It goes beyond competitive analysis, does not simply make comparisons, and is a learning process to promote cultural change (Mendes, 1997). Moreover, through the Internet as well, global alliances for benchmarking are coming together to help spread and share best practices world wide. In 1999, APQC joined forces with the Hong Kong Productivity Council (HKPC) and the Australian Quality Council (AQC) as the first members of this global alliance. Moreover, another initiative was launched in 1997 between APQC and EFQM labelled Best Practices for Global Competitiveness which had profound impacts on spreading and improving the benchmarking concept world-wide. It allowed participants to benchmark their organisations on a truly global basis via satellite.

Today we see examples of successful benchmarking in all sectors like Health Services (Ridge, 1999), Insurance (L'esper, 1999; Rometty, 1999), Financial Services (Rometty, 1999), Construction (Cheng, 1999), Real Estate Advisors (Harding, 1999), Banking (Welch, 1999; Siems, 1999), Government (Ammons, 1999; Coe, 1999), Maintenance Management (Dunn, 1999), Higher Education (Tang and Zairi, 1998), Brand Management (Schultz,

1998), etc. General consortia or union-lead studies are abundant (mostly involve the building of a database of metrics from across the industry) like the grocery retailers in Canada, Construction in the UK, metalcasting (American Association of Cost Engineers) (Creese, 1999). The practice of benchmarking is expected to gain even more momentum. There is an 'obsession' with the tool of benchmarking and the mechanistic aspects of stages and steps involved in conducting successful benchmarking expeditions (Zairi and Whymark, 1998).

Types of Benchmarking

The term 'benchmarking' is used to describe a number of different activities. The simplest, 'metric benchmarking' (or Performance Benchmarking (Bogan and English, 1994)), concerns comparisons of performance data. An example is the data presented in Manufacturing Winners (DTI et al., 1995), based upon the 1994 'Best Factory Awards' (Yarrow, 1999). So long as we are comparing 'apples with apples', metric benchmarking can serve a useful purpose as a 'call to action'. However, its emphasis is on the 'what' rather than the 'how'. This form of benchmarking can help an organisation to pinpoint aspects of performance that need to improve, but on its own it cannot help them to learn how to improve (Yarrow, 1999).

Another mode is 'diagnostic benchmarking'. It seeks to explore both practices and performance, establishing not only which of the company's results areas are relatively weak, but also which practices exhibit room for improvement. While process benchmarking (third type) is an improvement technique, diagnostic benchmarking is more akin to a 'health check' for the company, helping to identify which practices need to be changed and the nature and extent of performance improvements which should follow (Yarrow, 1999).

A third mode involves two or more organisations comparing their practices in a specific area of activity, in depth, to learn how better results can be achieved. This is 'process benchmarking', and is described fully in the literature (e.g. Camp, 1995; Zairi, 1992). This mode of benchmarking offers the greatest potential benefits, but is difficult and expensive (Yarrow, 1999). By focusing on cost (i.e. how much), short-term results can be achieved in terms of the desired reductions sought but a

great opportunity of enhancing competitive standards can very easily be missed. Competitive standards can only be achieved through understanding how processes function, why these are superior, where the effort is being placed, etc. (Zairi, 1994).

The most widely accepted fundamental types of 'process benchmarking' were discussed by many scholars (Zairi and Leonard, 1994; Camp, 1989), and are as follows:

1. Competitive benchmarking – identifying performance gaps in relation to competitors. May be limiting on its own due to the difficulty of obtaining useful and accurate information from competitors. Moreover, it may not lead to best practices. Camp (1989) warns of the need to make sure that data gathered is comparable and provides a number of comparability tests.
2. Functional benchmarking – specific functions like HR are compared to the same function in another company known to be operating a 'best practice' in this function. Powerful technique and may lead to breakthrough improvement, especially since the best practices seen working and successful. However, since most of it is done in sectors outside the company's own, the comparison has to take into account cultural, geographical and other factors to be valid.
3. Internal benchmarking – comparing within one's own company, and more likely in large organisations where many sites are available, or a conglomerate. Camp (1989) viewed this as the easiest type as data readily exists and no confidentiality problems. Also, it is a good starting point and training grounds for external benchmarking. Still, it does not guarantee identification the industry best practices.
4. Generic benchmarking – similar to functional benchmarking but goes beyond comparison of quantitative data and examines the qualitative factors associated with the critical business process at the heart of the function, i.e. why a performance gap exists. This is a much more holistic approach and focuses on multi-functional business processes. It enables understanding of how best practice companies have achieved superior performance. It focuses on the methods and practices at the heart of the critical processes.

Moreover, benchmarking can be strategic or operational in nature. Strategic benchmarking is

primarily concerned with process management, whereas operational benchmarking mainly looks at performance management. Consequently, benchmarking can be applied at many different levels throughout the business planning process. At the strategic level, benchmarking is used to identify the performance standards required against four corporate priorities: customer satisfaction, employee motivation and satisfaction, market share, and return on assets. This exercise should reveal key elements of strategy that have been overlooked and can also yield significant recommendations for how future strategy can be altered to maximise performance. Strategic benchmarking helps to assess the impact actions to close the 'value gap' between a company and its peers, which may include steps to improve revenue generation, reduce the cost of sales, improve asset management and so on. Companies with experience of operational benchmarking such as Xerox and AT&T have stated they intend to increasingly use strategic benchmarking as an integral part of their strategy formation process.

Benchmarking Methodologies

Choosing the right benchmarking methodology is an essential key in making benchmarking a success. Many organisations have their own guides, success stories, and benchmarking methodologies like AT&T, The Post Office, American Express, Xerox, Schmidt, Alcoa, APQC/IBC, TNT, McKinsey & Company, BBC, Rover Group, Texas Instruments, IBM. Benchmarking at AT&T involves 12 steps, IBM uses 16, Xerox has 10, and Weyerhaeuser has 33. There is nothing magical about the number of steps, the fundamentals are almost identical (Grayson, 1992). After analysing most of these approaches, Zairi (1996) concluded that "*most, if not all, of the methodological approaches are preaching the same basic rules of benchmarking, but using different languages.*" and that "*most methodological approaches are based on the Rank Xerox approach, which is considered to be an effective and generic way of conducting benchmarking projects.*"

After conducting a benchmarking study of 14 documented methodologies to benchmarking at the European Centre for TQM, Zairi (1995) noted that The International Benchmarking Clearinghouse (IBC) benchmarking methodology came in at number one as it demonstrated better clarity, clearer focus, more

logical progression, and completeness (this methodology is shown in Figure 1).

Best Practices for Benchmarking

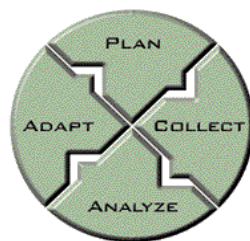
As experience with benchmarking applications increased, many realised some common threads in successful benchmarking approaches and efforts. These are considered to be the 'best practices' for successful benchmarking and are presented here from various sources (APQC2, 1996; Grayson, 1992; Zairi, 1996; Powers, 1995; Ammons, 1999; BBC, 1994):

1. Senior management's strong support for benchmarking. APQC studies revealed that organisations in which senior management vigorously supports benchmarking more consistently gain operational benefits and see higher financial paybacks than do other organisations. Senior managers at Xerox, Digital Equipment Corp., Motorola, GTE, AT&T, Chrysler, AMP, Texas Instruments, Sprint, and other organisations strongly support benchmarking (APQC2, 1996; Powers, 1995).
2. A culture that generally encouraged teams to seek out and adapt ideas originating outside the organisation. Experience proves that many ideas originate not just outside one's own company but also outside one's industry (APQC2, 1996). Adapt do not adopt. Most best practice will need adapting to another organisation (Ammons, 1999).
3. Making a business case (cost/profit projection) before implementing benchmarking findings.

Plan During this phase the specific study focus area, key measures, and definitions are established and clearly documented.

Additionally, the data collection tools are refined and finalised, and research is conducted to identify the best-practice organisations to study. Representatives from the sponsor organisations select the best-practice organisations to be visited.

Collect This phase has two distinct objectives: 1) collect qualitative data, and 2) learn from the best. The study questionnaire is administered to



all participants, and site visits are conducted at selected best-practice organisations.

Analyse Key activities during this phase include analysing trends and identifying practices that enable and hinder superior performance. The study team presents a final report containing key findings and insights at a Knowledge Transfer Session. At this concluding meeting of the study, the sponsors discuss the key findings in depth and have an opportunity to interact with each other and the best-practice organisations through systematic networking activities and presentations. The study team facilitates participants' initial action plan development to adapt and implement what they have learned.

Adapt Adaptation and improvement resulting from the best practices identified throughout a consortium study occur after the study participants take the learning back to their organisations. For an additional fee, APQC staff members are available to help study participants create action plans appropriate for their organisations based on the study learnings.

Figure 1: IBC's Benchmarking Methodology

Source: American Productivity and Quality Centre Publications

4. Follow up benchmarking projects by measuring the operational and financial results implementation. Such follow up gives senior management the information it needs to judge benchmarking's financial value and relative importance in meeting the organisation's strategic objectives (APQC2, 1996).
5. Insist on a formal methodology. It is very important to understand that there are three parts to benchmarking: comparative analysis, new process design, implementation. Benchmarking must include all three parts. Many people claim they are doing benchmarking when all they are really doing is comparative analysis. The message is 'do not set benchmarks, do benchmarking' (Zairi, 1996).
6. Insist on a strict adherence to a Code of Conduct. There should be a clear Code of Conduct for Benchmarking for organisations to follow in order to advance the professionalism and effectiveness of benchmarking, and to protect participating organisations. APQC and EFQM both have their own Code of Conduct. They cover

- legality, confidentiality, information use, preparation and even offer a protocol for the whole process.
7. Clarify the objectives of the study: what needs to be accomplished, which questions must be asked, which areas to look at, etc., i.e. do your homework (Feltus, 1994).
 8. Understand your own processes. Choosing the optimal benchmarking partner requires a deep understanding of the process being studied and of the benchmarking process itself (APQC2, 1996).
 9. Sources of finding best practices include: published information, annual reports, conferences, professional benchmarking organisations, customers, suppliers, benchmarking databases (e.g. DTI, 1995), professional associations, trade associations, professional journals, magazines, newspapers, exchanges, face-to-face interviews, direct information exchange, groups, intermediaries, site visits (BBC, 1994).

Research Methodology

This study aims to evaluate the level of benchmarking maturity reached across different industry fields and size of operation. A questionnaire was, therefore, developed to assess the various aspects of benchmarking (approaches, benefits, challenges, and trends). The questionnaire was designed for self-completion by managers in a postal / internet-based survey. The survey targeted organisations involved in benchmarking activities, and the organisations invited to participate came from the Benchmarking Exchange members (world-wide) in the form of Internet based survey, the Benchmarking Centre members (UK) in the form of postal survey, and subscribers to the International Journal of Benchmarking (UK) in the form of Internet and postal survey. All the responses were coded to facilitate computer analysis and the main tool for results analysis was Statistical Package for Social Sciences (SPSS), which is one of the most widely used, comprehensive and flexible statistical programmes. Overall, 227 organisations took part. Participant organisations came from 32 different countries, as shown in Table 2 below, making this study truly global.

A similar wide cross section of participants was also apparent in the organisational sector they came from. The participating organisations' sectors came from a very wide range as demonstrated in Figure 3 below.

Country	% of total	Country	% of total
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	participants		participants
USA	36.2	Chile	0.5
UK	24.9	Mexico	1.4
Australia	10.4	Holland	1.4
Canada	2.3	New Zealand	0.5
South Africa	3.2	Belgium	0.9
UAE	0.9	Sweden	0.5
Italy	0.5	Finland	0.9
Thailand	0.9	Denmark	0.5
India	3.2	Costa Rica	0.5
Ireland	1.8	Zaire	0.5
Germany	2.3	Sri Lanka	0.9
Portugal	0.9	Norway	0.5
Malaysia	0.9	Russia	0.5
France	0.5	Hong Kong	0.9
Switzerland	0.5	PR of China	0.5
Singapore	0.5	Spain	0.5

Table 2: Study participants by country

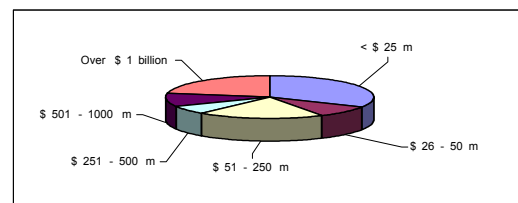


Figure 2: Study Participants by Annual Sales Volume (\$US)

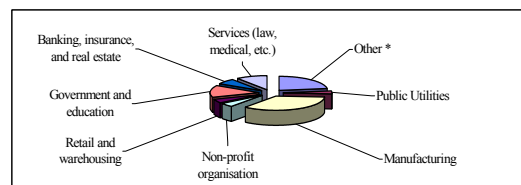


Figure 3: Study Participants by Industry Sector

Other included Contract Catering; Management Consulting, Transport and Distribution, Architecture, Defence, Software Services, Energy (oil and gas refineries and production), Telecommunications, Aviation, Construction (Engineering and contracting), Mining, Environmental Services, Leisure Management

Key Findings

The results so far have revealed a clear spread of benchmarking world wide and across various industry sectors and organisational sizes. This goes to add further proof to the importance of benchmarking as a management tool for the future and the momentum it has gained over the years. Moreover, as the results show that such a wide cross section of organisations are applying benchmarking, this highlights that

benchmarking is applicable across organisations irrespective of their location, size, or industry thus exploding several benchmarking myths like:

- Benchmarking is too expensive and only large organisations can do it.
- Benchmarking is most useful for manufacturing organisations to compare products and manufacturing processes.
- Benchmarking is fad.

Approaches to Benchmarking

This part of the study was used to investigate which approaches have been used to acquire benchmarking skills within the participating organisations, and the effectiveness of these approaches. According to the study participants, Table 3 displays the most effective approaches to acquire benchmarking skills within an organisation.

The results reveal a bias toward informal approaches to building benchmarking skills. The top two approaches were reading books and publications and informal liaison with benchmarking experts. This might be partially explained by the investments required to engaging formal training events or conferences. However, the wider implications point to a bias toward action and hands-on experience (liaising with experts, reading case studies). This is further emphasised by the set of additional approaches that the participants provided. These are (in descending order of effectiveness):

- Actual participating in benchmarking projects (mainly site visits to other companies)
- Networking with experienced companies – e.g. Learning from a sister company, visiting a company with benchmarking experience, collaboration with industry peers, and collaborating with research centres or universities.
- Hiring external consultants.
- Internet resources and searches (e.g. TBE).
- Membership of ‘benchmarking’ clubs, networks, or communities of practice.

Approach to gaining Benchmarking Skills	% *
Reading benchmarking books, articles and/or other publications	70.9
Informally liaising with benchmarking experts	64.5
Attending external benchmarking training events	49

Attending in-house benchmarking training events	46.6
Attending benchmarking conferences	43.6
Watching a video on benchmarking	21.6

* percentage of participants who rated the approach it as highly effective, very effective, or effective

Table 3: Approaches to acquiring benchmarking skills

This overall informal approach to benchmarking was also relevant in the use of benchmarking models. Figure 4 shows the percentage of organisations that use a model for their benchmarking initiatives and those that seem to ‘just do it’.

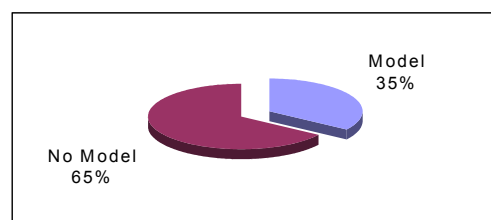


Figure 4: Using/Not Using Particular Models for Benchmarking Activities

The study revealed that only 35% of the organisations used a model. Table 4 shows which models were the most frequently used ones.

Benchmarking Model Used	%
Developed own model *	24
Robert Camp	13
Business Excellence Model, MBNQA	11
International Benchmarking Clearinghouse - APQC	10
Xerox 10 Step Model	10
Consulting Company provided (e.g. Arthur Andersen, Kaiser Associate, etc.)	9
National Guideline (e.g. CBI Probe (UK), Local Government Guides (Australia)	5.5
Benchmarking Centre (Sylvia Codling)	4
Kaplans Scorecard	2.5

Table 4: Most frequently used benchmarking models

Clearly, most organisations rely on the ‘own model’ and a few well known classics like Robert Camp, Xerox, BEM, and the APQC. However, even those organisations that noted that they use their own’ model, very few had original models like AT&T and ICL. Most of the other organisations had actually modified (adapted and mostly simplified) wither Xerox’s Ten-Step model or Robert Camp’s model.

Types and Usage of Benchmarking

This part of the study aimed to identify which types of benchmarking organisations focused on and how many projects did they undertake per year in each category. Figure 5 reveals the results.

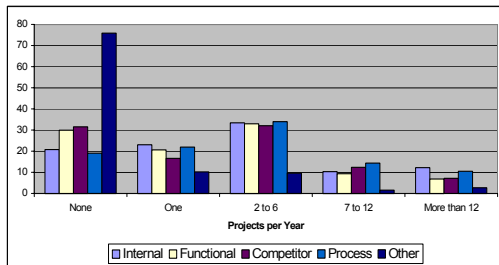


Figure 5: Types and Usage of Benchmarking

The results in this area are very revealing and the following conclusions can be deduced:

- Although all four types of benchmarking seem to enjoy equal focus, process benchmarking is the main type being used immediately followed by internal benchmarking.
- Results stressed the growth of awareness and usage of internal benchmarking highlighting the fact that it is gaining momentum and its usage is predicted to increase in the future with the advent of knowledge management applications.
- At least 20% of the participant organisations undertake more than 6 benchmarking projects per year, while the majority undertake 2 – 6 projects. This indicates that for participating organisations, benchmarking is not just another tool or fad, it is becoming part of the way they do their work.

Use of Benchmarking Data

The participating organisations provided insights on where they used the benchmarking data and how relevant the data was for that particular use. Figure 6 shows the top four uses were benchmarking data was most relevant.

Areas where benchmarking data was most relevant
To improve a process (84.2%)
To assist with self assessment (70.9%)
To check subjective assumptions made (58.2%)
To provide secondary data (46%)

Figure 6: Top Uses of Benchmarking Data

Clearly the most frequent usage of benchmarking was for process improvement. This cements the fact that benchmarking is not a measurement tool but learning tool for improvement. The second most prominent use of benchmarking data was to assist with self assessment, which clearly points to the focus of self assessment models on benchmarking (as discussed earlier). Only 32.4% used benchmarking data to find solutions for a company in crisis, which although is a substantial number, it still points to the fact that the majority of participants do not view benchmarking as a quick fix.

Finally, several other uses where benchmarking data was thought relevant were provided by some participants like: budget substantiation, investment support, to comply with QS9000, input to strategy, to drive vital few direction, to prove competitiveness to board, impact evaluation on client, and ‘because it seems that others are doing it’.

Integrating Benchmarking with Other Tools

The study aimed to identify whether participants organisations have integrated their benchmarking approaches with other management tools like BPR, Strategic Management, IIP, TQM, and if so, to what degree was the integration attempted. Figure 7 shows the results.

As the figure demonstrates, there has been attempts to integrate benchmarking with all the management tools mentioned. Total Quality Management has the lead in integration with benchmarking followed closely by BPR, and Strategic planning tools. Investors In People was the least attempted one. If anything, these results demonstrate the importance of benchmarking as a tool for learning and improvement that no matter what management tool or approach organisations were using, the attempted to integrate benchmarking with it.

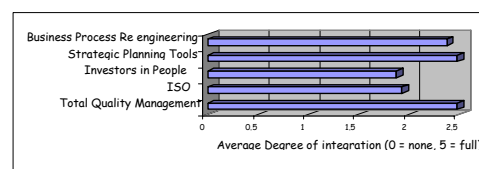


Figure 7: Benchmarking Integration with Other Management Tools

A closer look at the results in Figure 8 reveals that although TQM and BPR seemed to enjoy

equal integration with benchmarking, on average, it is TQM that enjoys the lion's share when it comes to 'full integration'.

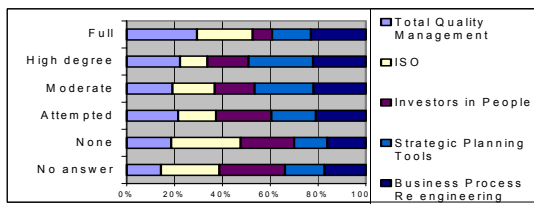


Figure 8: Level of Integrating Benchmarking with Other Management Tools

As for integrating benchmarking with TQM, many organisations, like Sprint, put benchmarking in the framework of total quality and process improvement, i.e. it is not seen as a stand-alone saviour (Powers, 1996). In addition, benchmarking can only be applied as an integral part of TQM. While the latter encourages performance improvement through teams, problem-solving and employee empowerment, benchmarking is a top-down activity for objective setting and their effective deployment to the teams (via the TQM route) so that performance gaps can be closed (Zairi, 1994).

It sometimes is the case that organisations carry out benchmarking exercises without being visibly committed to the introduction of TQM. This approach could be, at the very best, a good barometer. It reflects a "business as usual" type of culture with no change at all, where TQM very often means measurable impact on bottom-line results, where there is more interest in internal activities and pre-determined standards and where the internal standard of effectiveness is unknown. The quick dip approach could however be a dangerous one to take, since it may create a false sense of security (managers taking outcomes of exercise at face value). It is also possible that managers may misinterpret the data obtained and develop "stretch objectives" without really understanding true organisational capability (i.e. voice of process). As far as BPR is concerned, both benchmarking and reengineering have much in common, and reengineering can greatly benefit from integration with benchmarking. The benefit comes mainly in two areas:

1. Targeting the processes to reengineer is better done when guided by systematic benchmarking studies than through casual or arbitrary selection by executives or consultants.

2. Reengineering's technique of creating a new customer-oriented approach through use of mainly internal thinking would be greatly enhanced by systematic input of benchmarking partners' experience (Thor, 1999).

Sprint believes benchmarking should be used as a tool within strategic business process improvement and reengineering. According to Amen, it's the process of understanding what the organisation does and what the critical components are. The underlying question is: Who does it and what can we do to become or remain the best of the best? (Powers, 1996).

Benchmarking Implementation Aspects

In order to test how benchmarking is being used in organisations, the study participants were asked to select from several options. Figure 9 summarises these results.

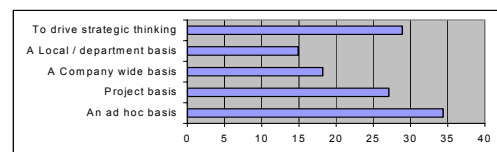


Figure 9: How benchmarking is used in the participating organisations

(note participants were able to tick one or more, i.e. elements were not mutually exclusive)

The results reveal that most of benchmarking initiatives are pursued on an ad hoc basis. This confirms the earlier findings, which revealed a lack of systematic use of benchmarking models. However, it is encouraging to see that nearly 30% use benchmarking to drive strategic thinking which reflects a forward looking approach.

Internal transfer for Best Practices

To assess the practices of participating organisations in terms of internal transfer of best practices at their organisations, the study presented several mechanisms to identify which ones were applied. Figure 10 reveals the results.

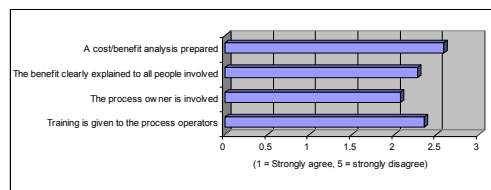


Figure 10: Mechanisms of Internal Transfer of Best Practices

Clearly, all the four practices discussed are applied with relative consistency. The practice that received strongest agreement was the involvement of the process owner. These results highlight the importance of 'involvement' in general for all employees for effective transfer of best practices, be it training employees, involving the process owner, or explaining the benefit via communication with the employees. However, the factor that seems to be least applied (although still far from being ignored) is preparing a cost benefit analysis. In this regard, the organisations that seem to skip this part may justify it along the same lines of argument as 'validating the best practices'.

As for the means and channels used for communicating the internal best practices, several options were identified and organisations were requested to point out all the ones they used. Figure 11 shows how often each channel was noted. Other alternative approaches used and added by participating organisations included: best practice knowledge database, team work day celebration, end of project report, part of goal and objective setting, direct participation in benchmarking projects, as part of workflow management system, planning workshops, and training and progress review workshops. Only 1% of the participants mentioned relying on a "best practice transfer process".

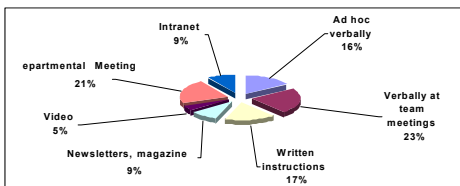


Figure 11: Frequencies of Usage of Internal Best Practices Transfer Methods

Finally, regarding the method used to evaluate the best practices after implementation to identify the benefits gained, 49 % do not have any formal process for this, and 10% do not even do it (See Figure 12). However, there are 51% of the participants who actually have a formal process, which stresses the importance of this review phase to the 'effective' transfer of best practices.

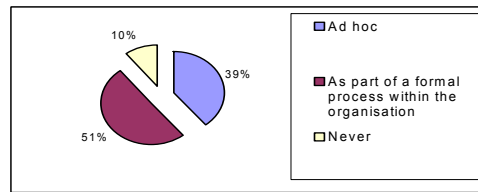


Figure 12: How best practices are evaluated after implementation

4.0 CONCLUSIONS

Much has been written and there have been many conferences about benchmarking over the past ten years. The concept has grown, achieved massive success stories for many, withstood criticism, and evolved to maturity. Its development has contributed greatly to the establishment of the KM field. In fact, benchmarking has been popular for several years. In the many countries (e.g. UK, USA), many national initiatives continue to encourage organisations to benchmark, as they realize that current and future competition will be knowledge-based. Many have tried various techniques, some have achieved substantial benefits, but others have been disappointed by the results.

This study has attempted to provide answers to the following research questions:

- What is the status and development in the utilisation of benchmarking and best practices across different regions and countries?
- How are different sectors approaching benchmarking and best practice?
- What are the factors that facilitate effective benchmarking and implementation and transfer of best practices?
- What are the major barriers and impediments to benchmarking for best practice?
- What are the benefits that are being delivered and how can companies most effectively attain these?
- What are the key challenges that lie ahead for benchmarking?

The study has gathered information on both the hard and soft issues associated with benchmarking. This global survey contributes to the understanding of what leads to effective benchmarking and development of best

practices. In doing so, it helps fill the void in the KM literature about soft tools of best practice and knowledge transfer

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