

The Adoption of Benchmarking Principles for Project Management Performance Improvement.

Ifeoluwa Ajelabi and Yinshang Tang

Informatics Research Centre, Henley Business School,
University of Reading, United Kingdom.

i.k.ajelabi@reading.ac.uk, y.tang@henley.reading.ac.uk

ABSTRACT

Effective management of projects is increasingly becoming important for organisations to remain competitive in today's dynamic business environment. The use of benchmarking is widening as a technique for supporting project management. Benchmarking is the search of best practices that will lead to superior performance in some business activity. Benchmarking has been recognised as one of the most responsive evaluation tool for performance improvement within organisations by creating a culture of continuous improvement from learning best management practices. This paper presents how benchmarking principles can be applied to improve project management process and performance. The benefits and challenges of benchmarking management of projects are also discussed.

KEYWORDS

Project management, Benchmarking, Evaluation

1. Introduction

Project management over the years has been a successful tool for implementing change in organisations. Organisations have reported the benefits derived from using project management tools and methodologies to implement change. So much so, opportunities are constantly being explored to make it a more effective tool [10]. One of such opportunities is the ability to transform or improve project's performance using the management lessons learnt from project to project. Benchmarking has been argued to be an efficient tool which makes significant improvement to performance. Past research, has shown the difference in performance between leading organizations and average ones in performing particular activities [11]. Benchmarking against leading companies has resulted in significant success for average organizations in improving their performance [21]. This paper continues this inference and suggests that similar improvements in performance of managing companies that occur from benchmarking can also be achieved by benchmarking projects. This paper explores this in four sections. First, existing definition of benchmarking and the general purpose of benchmarking are reviewed, indicating benchmarking process. The second section of the paper, will explain the different types of benchmarking and how it can be applied to the management of projects. Next, will discuss what to benchmark and the competencies to look out for and how these competences are measured and evaluated. Finally, the challenges of benchmarking management of projects will be discussed.

2. What is Benchmarking?

Benchmarking is a technical core of Total Quality Management (TQM), a subject characterized by the culture of continuous improvement. It is a process of identifying superior performance or practices of other organizations or projects (to keep in the context of this paper) and to internalize such knowledge for competitive advantages [1]. Benchmarking is a learning process to find better ways of doing things. It is a management process that requires constant updating whereby performance is regularly compared with the best performers that can be found. The key philosophy of benchmarking is the ability to recognise one's shortcomings and acknowledge that someone is doing a better job, learn how it is being done and implement it in one's field of business[2]. Benchmarking is not about copying or imitating, rather it is about adapting lessons learnt from the best for the development of an improved organizational or project performance [5].

Benchmarking, has endured many different definitions since it was first pursued by Xerox Corporation, the International Benchmarking Clearinghouse (IBC) Design Steering Committee concluded and represented the consensus after consulting about 100 companies in 1992. They defined benchmarking as: "A systematic and continuous measurement process; a process of continuously measuring and comparing an organisation's business processes against business process leaders anywhere in the world to gain information which will help the organisation take action to improve its performance [3]."

The definition of benchmarking reveals that benchmarking is not only a measurement process that results in comparative performance measure, it also describes how exceptional performance is attained. The exceptional performance is identified by measures of performance indicators, which are called benchmarks and the activities that facilitate the exceptional performance called enablers [4]. Enablers explain the reasons for the superior performance, therefore benchmarking studies are conducted with the support of the two components when they are practically connected. That is, benchmarks can be achieved by attaining enablers.

In order to transform benchmarking analysis requirement to the above two types of output, many models and methods have been evolved from the original ten-step four-phase model developed by Xerox, to explain and guide the benchmarking process. Most of the approaches are valid and they all take their root in an iterative benchmarking process proposed by W.E Deming. The model of benchmarking process is famously referred to as the "Deming cycle" and it includes a minimum of four phases "Plan -Do-Action-Check" as illustrated in Figure 1 below.

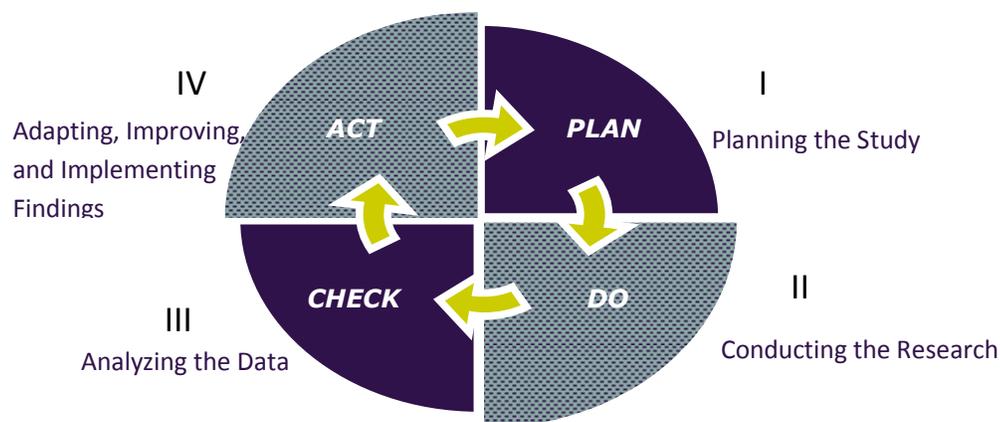


Figure 1: Deming's Benchmarking Cycle

3. Types of Benchmarking

Benchmarking is about comparing processes, practices or procedures. Processes may be compared within an organisation against internal operation or with partners outside the organisation. There are several ways to classify types of benchmarking, depending on the focus of the benchmarking process. The types of benchmarking reflect “what is compared” and “what the comparison is being made against”. The former involves comparisons of performance, process and strategic benchmarking; while the latter involves internal, competitive, functional and generic comparisons [5].

Type	Definition
Performance Benchmarking	It is the comparison of performance measures for the purpose of determining how good an organisation is in comparison to others
Process Benchmarking	It is the comparison of methods and processes in an effort to improve the processes in an organization
Strategic Benchmarking	It is the comparison of an organisation’s strategy with successful strategies from other organisations to help improve capability to deal with a changing external environment.
Internal Benchmarking	It is the comparisons of performance made between department/divisions of the same organisation solely to find and apply best practice information.
Competitive Benchmarking	This is the comparison made against the “best” competition in the same market to compare performance and results.
Functional Benchmarking	It is comparisons of a particular function in an industry. The purpose of this type of benchmarking is to become the best in the function.
Generic Benchmarking	It is the comparison of processes against best process operators regardless of industry.

Table 1: Types of Benchmarking

Types of benchmarking are rather complementary than being mutually exclusive. They can be chosen and combined for a specific purpose [7]. Their combination is based on the relevance of the type of benchmarking to a specific context. Table 2 below, shows the combination of the types of benchmarking designed by Bhutta and Huq [7] to yield better results.

As can be seen from the combinations, some types of benchmarking are more relevant than others in particular contexts. For instance, an internal benchmarking is given a low relevance in relation to strategic benchmarking, as a comparison of strategy with oneself would give little or no improvement. However, competitive benchmarking is given a high relevance in relation to strategic benchmarking, as it would reveal a lot of information and provide many ways for improvement.

What is Benchmarked	Against Internal	what to benchmark Competitive	Functional	Generic
Performance	Medium	High	Medium	Low
Process	Medium	Low	High	High
Strategic	Low	High	Low	Low

Table 2: The matrix of different forms of benchmarking [15]

Watson [9] also discusses benchmarking as a developing science [9]. Figure 2 shows how the first generation of benchmarking evolved following from Camp [4]. This generation of benchmarking called “Reverse Benchmarking” was product oriented, and focused solely on the comparison of products characteristics, functionality and performance with similar products. The second generation “Competitive Benchmarking” involved the comparisons of processes with those of competitors. Third “Process Benchmarking” allowed for information sharing from companies outside their industry. Evaluations targeted companies with recognised strong practices independent of the industry and competitors. The fourth generation “Strategic Benchmarking”, involves a systematic process of evaluating alternatives, implementing strategies and improving performance by understanding and adapting successful strategies from external partners who participate in an ongoing business alliance. The fifth generation “Global Benchmarking” is an emergence of a global application of benchmarking, thus dealing with globalization of industries themselves [1]. Some extensions of the model are beginning to emerge as Kyro [8] claims to foresee a sixth and seventh generation called “benchlearning” and “network benchmarking” respectively.

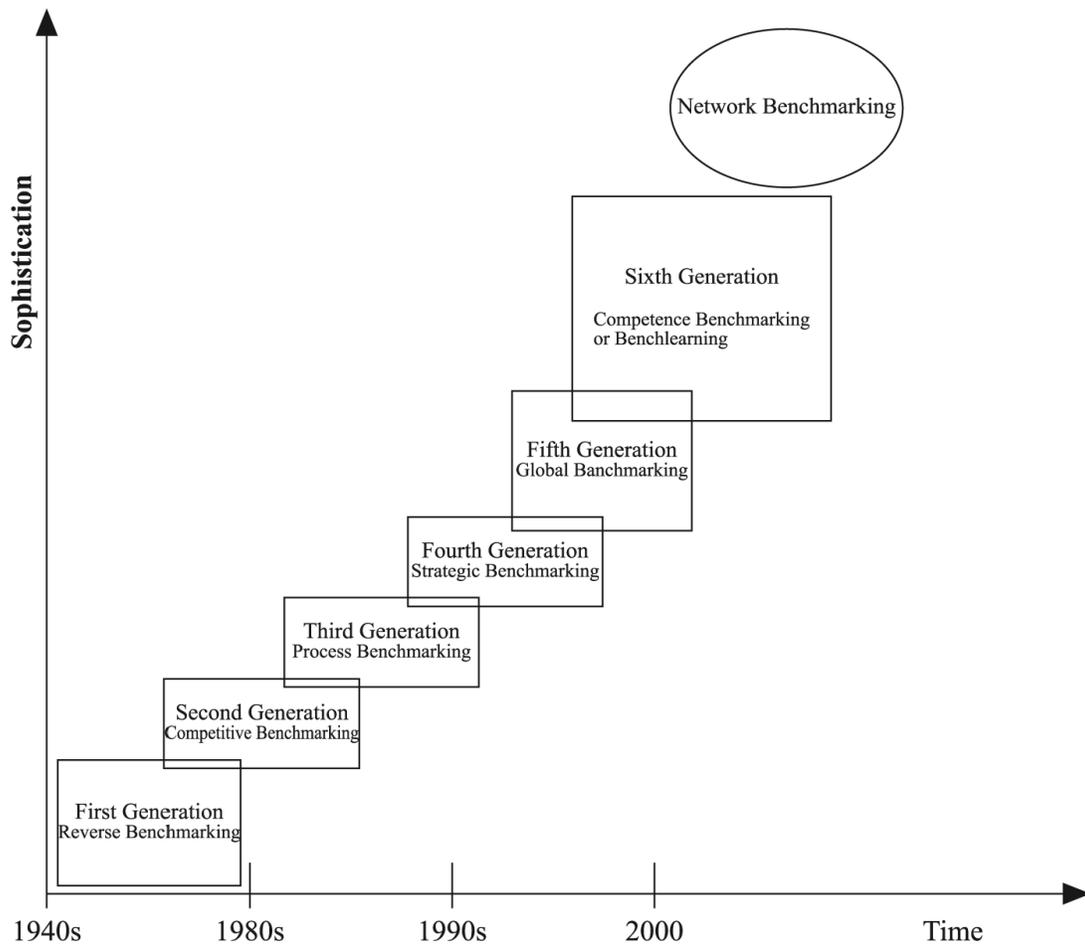


Figure 2: Benchmarking as a developing evaluation tool [23].

4. Benchmarking in Project Management

The primary driver behind any benchmarking initiative including that of project management is improvement. Maylor[12] described the process for project management as having four phases as illustrated in Figure 3 below. The concept behind the “Develop the process” phase is of continuous learning and improvement, by evaluating project progress, learning from its experience and using the information to improve the management process of future projects. The improvement process is divided into two parts 1) learn by doing and learn before doing. Tools such audit reviews, lesson learnt and scorecards are used to evaluate the project progress. Benchmarking on the other hand bridges “Learn by doing” and “Learn before doing” with the objective of learning and improving the management process of future projects.

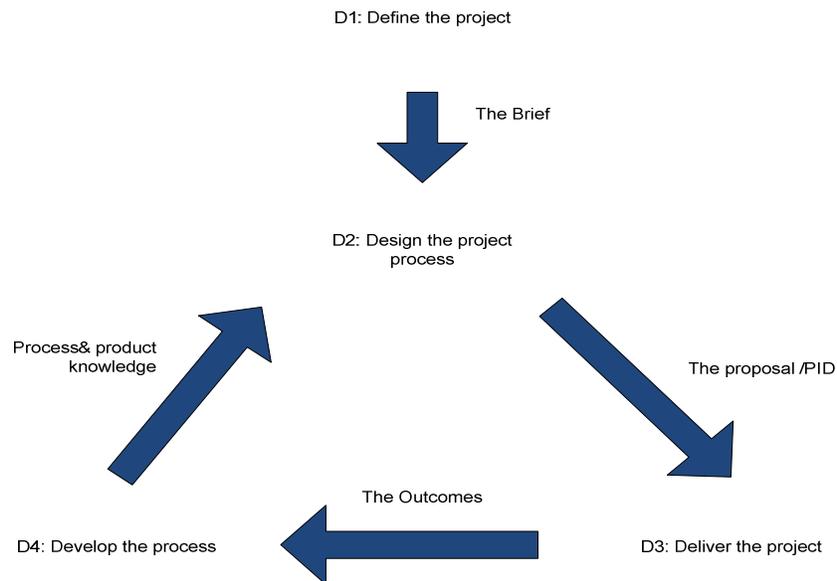


Figure 3: Four phases of project lifecycle [12].

4.1 What to Benchmark?

As mentioned earlier, benchmarking is a method of assessing the quality of a project’s management and learning from it for the management of future projects. Based on literature, the project manager is responsible for orchestrating the management progress of a project [5, 13]. The project manager therefore should possess certain skills and competency to achieve excellence in managing projects. These excellence skills and competency are measured for classification as best practice. Competence is defined as the knowledge, skills and personal attributes that lead to superior results or meet performance standards [16].

The two well known project management bodies of knowledge (APM and PMI) identify the primary competencies an effective project manager should possess. Although more explicitly stated by PMI[22], the core competencies include, scope, schedule management, cost management, human resources, communication management, risk management, quality and contract management.

4.2 How is the competency measured?

The management of a project process is mostly measured by the success of the project. The success criteria used to measure the management of a projects has been studied by various researchers over the years. Primal success criteria have been an integrated part of project management theory given that early definitions of project management includes the “Iron triangle” success criteria- cost, time and quality [14]. Atkinson in his paper stated that “as a discipline project management has not really changed or developed the success measurement criteria for project management in almost 50 years”. He argues that the “Iron triangle” does not indicate how excellent or otherwise the management of a project has been. He further argues, the iron triangle is trying to match two best guesses (time and cost) and a phenomenon (quality) correctly [14]. Therefore evaluating against these criteria is flawed. To meet the urgent need of modernizing the out of date success criteria to measure project management success, Atkinson suggested the “Square root”, which he believed would create a more realistic view of the management of projects [5]. The square root is a combination of quantitative and qualitative objectives. He combines the “Iron triangle” into one criterion and added three other criteria, Information systems, Organisational Benefits and Stakeholders Benefits. Belout [20] in his attempt to measure project management success suggested the achievement of project goals (effectiveness) and the maximisation of output for a given output (efficiency) as the success criteria to judge the management of a project.

5. Challenges of Benchmarking in Project Management.

Benchmarking the management of projects has its own challenges. First is, projects by definition are unique entities with a stipulated lifecycle. Therefore, there is little commonality between projects or the differences between projects are so great that separating between differences from the similarities is almost impossible. The unique difference between projects is reflected in the way they are managed, making it difficult to translate the best management practices between one another.

Second, the lack of an objective way to measure the subjective metrics of project management success. For example, Atkinson’s project management success criteria [14], the success criterion “benefit to organisation” includes some subjective attributes, such as increased profits, organisational learning, reduced waste and improved effectiveness. Logical as these success criterion attributes are, the lack of an objective way to evaluate them remains a challenge.

Third, is the difficulty in determining the true causes of project performance. Even if successful project managers are asked what they have learned, do we really believe that they can identify what has worked and what has not, what works under what project conditions but not others.

Fourth, project success factors have a significant effect on the management of a project. These project success factors have being researched and numerated by various authors [17, 18, 19]. These factors are critical to the success of a project and form the basis of the management evaluation criteria. This poses a challenge for project management benchmarking as the underlying influences of comparable projects must be similar.

Benchmarking of project management most times highlights the difference in performance without giving the reasons for the difference. Barber [5] in her paper highlighted that the difference in performance identified by benchmarking has more to do with the difference in methods of measuring and tracking project performances, rather than the difference in management of projects.

Furthermore, benchmarking is learning from external sources and then applying the knowledge “before doing”. Benchmarking therefore, can only address problems that have previously been

encountered by the compared project partner. It is quite difficult for benchmarking to provide feedback to assist current project experiencing difficult management problems because benchmarking can be a time consuming effort and unlikely to provide any solution at the latter stages of the project.

Despite these challenges, benchmarking management of project has its benefits. It is a continuous process that allows for management of projects to measure their performance against the best practice and identify areas for improvement.

6. Conclusion

This paper has examined how benchmarking principles can be applied to evaluate and improve project management performance. Benchmarking an outward looking evaluation tool, compares the performance of project management activities against the performance of project management conducted by leading benchmark partners. By benchmarking projects, maximum benefits are derived from projects. Not only from the outcome of the project but information gained from measuring the effectiveness of the project management process against best practice can be used to identify areas of improvement for managing future projects. In addition, project management best practice across an organisation can be identified, providing an opportunity for corporate learning.

REFERENCES

- [1] Ramabadron R., James W. Dean Jr and James R. Evans. (1997), Benchmarking and Project Management: a review and organizational model. *Benchmarking: An international Journal*, 4(1), 47-58.
- [2] American Productivity & Quality Center (APQC) (1996), *Emerging Best Practices in Knowledge Management*, American Productivity & Quality Centre, Houston, TX.
- [3] American Productivity & Quality (APQC) (1992) *Planning, Organizing, and Managing Benchmarking Activities: A User's Guide*, APQC, Houston, TX.
- [4] Camp, R. (1989) *Benchmarking: The search for industry best practices that lead to superior performance*, ASQC Quality Press, Milwaukee.
- [5] Barber E. (2004) *Benchmarking the management of projects: a review of current thinking*. *International Journal of Project Management*, 22(4), 301-307.
- [6] Kerzner H. (2000) *Applied project management: best practices on implementation*. New York; John Wiley
- [7] Bhutta K.S Huq F. (1999) *Benchmarking best practices: an integrated approach*. *Benchmarking: An international Journal*, 6 (3), 254-268.
- [8] Kyro P. (2003) *Revsing the concepts and forms of benchmarking*. *Benchmarking: An international Journal*, 10(3), 210-225.
- [9] Watson GH. (1993) *Strategic benchmarking: how to rate your company's performance against the world's best*. New York: John Wiley.
- [10] Clarke A. A (1999) *practical use of key success factors to improve the effectiveness of project management*. *International Journal of Project Management*, 17(3), 139-145

- [11]Gattorna JL, Berger AJ. (2001)Supply chain cybermastery: building high performance supply chains of the future. London Gower.
- [12] Mayor H.(2005) Project management 3rd Ed.London: Financial Times.
- [13] Cook-Davies T. (2002)The real Success factors on projects. International Journal of project Management, 20(3), 185-190
- [14] Atkinson R. (1999) Project management: cost, time and quality, two best guess and a phenomenon, it's time to accept other success criteria. International Journal Project Management, 17(6), 337-42
- [15] Leibfried and Mcnair (1992), Benchmarking ± A Tool for Continuous Improvement, Harper Collins
- [16] Crawford,L.H .(2003). Assessing and developing the project management competence of individuals. In J.R.Turner(Ed). People in Project Management. Aldershot,UK:Gower.
- [17]Shenhar AJ, Levy O, Divir D. (1997) Mapping the dimensions of project success. Project Management Journal, 28 (2), 5-13
- [18]Pinto JK, Selvin DP. (1988) Critical success factors across the project lifecycle. Project Management Journal, 19(3), 67-75.
- [19]De Wit A. (1988) Measurement of project success. International Journal of Project Management ,16(3), 164-70.
- [20]Belout A.(1998) Effects of human resources management on project effectiveness and success: towards a new conceptual framework. International Journal of Project Management, 16,21-26
- [21]Luu V.T, Kim S.Y and Huynh T.A (2008) Improving project management performance of large contractors using benchmarking approach,. International Journal of Project Management, 26, 758-769.
- [22]Project Management Institute (2004). Guide to project management body of knowledge 3rd Ed. ANSI.
- [23] Ahmed, P.K. and Rafiq, M. (1998), Integrated benchmarking: a holistic examination of select techniques for benchmarking analysis. Benchmarking for Quality Management and Technology, 5(3), 225-242.