

The BPIR.com - A benchmarking and best practice web-based resource for improving organisational performance

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Abstract

This paper describes the development of a web-based resource (www.BPIR.com) designed to facilitate organisational improvement by providing quick access to a range of benchmarking information, including tools, measures, and best practice case studies. The paper discusses the role of the resource in the context of knowledge management (KM) theory. The role of benchmarking and self-assessment, techniques on which the resource is based, are considered in terms of the improvement process. The paper then describes the rationale behind, and structure of, the web-based resource, and considers the role that it fulfils within the KM 'spectrum'. We conclude that BPIR and other such resources are effective for engendering deep, improvement-centred organisational learning, but this requires the effective interpretation of the information it contains within the user organisation. For this to effectively occur, the organisation must regard the resource as an enabling technology for its internal KM, and create the conditions within which its potential is maximised.

1. INTRODUCTION

'We are drowning in information but starved for knowledge'.

John Naisbitt, Megatrends, 1982

Due to advances in the 1990's based around the internet and associated technologies, there is now an endless stream of management and business improvement information that is readily available to management and improvement practitioners to assist them in their roles. The concern of those who are searching for new knowledge has switched from one of finding sources of information to one of managing the time needed to sift through the vast quantities offered by business research organisations, associations, books, newsletters, seminars, and of course the internet. In addition to this problem, organisations must manage their own internal knowledge effectively to sustain or create a competitive advantage. Knowledge Management (KM) has therefore become a key issue in

recent years. In any organisation, KM can range from something as simple as an evolving handbook of best practices, to something as complex as vast, online databases/warehouses that collect all sorts of data such as competitor information, customer details, financial data, employee data, process knowledge, and performance analyses.

This paper describes the development of a web-based resource, the Benchmarking and Performance Improvement Resource (BPIR.com), designed to facilitate organisational improvement by providing access to a range of benchmarking information, improvement tools, measures, and best practice case studies. Of particular interest is that the designers aimed to integrate the concept of knowledge management into its design to help managers and improvement practitioners find relevant management information quickly and effectively apply the learning gained. The paper begins by discussing the role of the resource in the context of knowledge management (KM) theory. It reviews the literature relating to current definitions and interpretations of KM, and the nature of the process through which data is converted into knowledge for the purposes of achieving organisational improvement. The role of benchmarking and self-assessment, techniques on which the resource is based, are considered in terms of the improvement process. The paper then describes the rationale behind, and structure of, the web-based resource, and considers the role that it fulfils within the KM 'spectrum'.

2. DEFINING KNOWLEDGE MANAGEMENT IN THE CONTEXT OF THE PRESENT ARTICLE

"Knowledge is not impersonal, like money. Knowledge does not reside in a book, a databank, a software programme – these contain only information. Knowledge is always embodied in a person; carried by a person; created, augmented or improved by a person; applied by a person; taught and passed on by a person; used or misused by a person"

Drucker (1993)

Various authors (e.g. Binney, 2001; Peters, 2001; and Hong, 1999) have discussed the confusion surrounding the multi-disciplinary area of KM, particularly in relation to its definition and boundaries. Malhotra (1998), echoing the views of Drucker above, has offered a definition of Knowledge Management as '*...a synergistic combination of data and information processing capability of information technologies, and the creative and innovative capacity of human beings*'. The following review of literature offers some definitions that are particularly relevant to this discussion.

For an organisation, knowledge management relates to the acquisition and utilisation of knowledge both from within and outside the organisational boundary. The knowledge required for improvement purposes may, for example, enter the organisation from external sources, such as other organisations. Augier and Vendelø (1999) discuss the importance of 'knowledge networks' in this process, citing Powell (1998 *in ibid*) who argues that '*when uncertainty is high, organisations interact more, not less, with external parties in order to access both knowledge and resources*'. The activity of external best practice benchmarking is clearly closely linked to this type of knowledge acquisition. Within the organisation, KM relates to the way in which the knowledge resources within a firm are tapped, shared, objectively examined, and codified to promote 'organisational learning'. This definition encompasses the notion of managing process knowledge (e.g. according to the 'knowledge spiral' proposed by Nonaka & Takeuchi, 1995), but can also relate more specifically to the 'physical' codification and storage of organisational knowledge via information systems and technology.

Newman (1997) discusses the KM problem in terms of a process whereby data (an abundant commodity in most organisations) is converted first into information, then into knowledge, and finally into new technology within the organisation. This process is referred to as the DIKT (Data-

information-knowledge-technology) learning process. To very briefly summarise this process, data are converted into information through understanding their context, and interpreting patterns and structures that exist within them. The new information is then absorbed into the existing knowledge base of the organisation, either confirming or tending to disprove current beliefs. In this way it becomes new knowledge. The knowledge thus gained may become new technology once the organisation, through a process of organisational learning, is able to embed and utilise the new knowledge gained to its sustained advantage. The stage of converting data to information is often enabled by information technology. However, as the quote from Drucker amply illustrates, IT systems provide only the means of capturing data and presenting information. It is the interaction of human beings with the IT that creates a KM application.

Binney (2001) proposes that the KM 'landscape' consists of six major themes, around which literature (regardless of the specific terminology employed within articles) tends to cluster. The author lists these clusters within what he terms the 'KM spectrum' as being: transactional KM; analytical KM; asset management KM; process KM; developmental KM; and innovation & creation KM. Across this spectrum, the role of the formalised IT component diminishes from (IT-driven) transactional KM at one extreme to innovation and creation KM at the other. The nature of the knowledge that is managed also changes across the spectrum from highly formalised through to predominantly tacit. To summarise Binney's spectrum, transactional KM is characterised by systems that present the user with required information on completion of a transaction with the IT system. Analytical KM describes the situation where vast amounts of disparate information are stored and used to create new knowledge or interpretations (such as data mining / warehousing, and Management Information / Decision Support System applications). A level of human interpretation of the output will be required in order to understand what the analysis is revealing. Asset management KM deals with the management of the knowledge assets of a firm. This includes the management of intellectual property and organisational explicit knowledge, and is enabled by methods such as document management systems and knowledge repositories. These first three categories deal with IT-driven, customised, in-house KM systems. This paper focuses upon the next three categories, which are of greater relevance to the discussion.

The next three categories in the spectrum are less explicitly IT-driven, and are characterised by less formalised knowledge. Yet these are the most relevant to the discussion within this paper. Process-based KM deals with the conversion of process data into improvement-centred knowledge. Sources of data within this category will include internal and external best-practice benchmarking activities. IT enablers are off-the-shelf or organisation-specific systems designed to produce the correct form of process information (or indeed merely data). Developmental KM is concerned with the development of an organisation's knowledge workers – therefore realising the full potential of human resources through training and education with minimal dependency on IT. Finally, innovation & creation KM deals with management's responsibility to create the ideal environment where knowledge workers can meet and collaborate in the production of new knowledge. Cited examples include networks, collaboration, communities, discussion forums, and multi-disciplinary teams. The knowledge being transferred in this instance may be predominantly tacit, and the use of enabling IT is again minimal.

Relevant issues in relation to IT-based KM

Firms may seek to manage knowledge through establishing a customised, in-house knowledge repository system. However, the in-house skills and resources needed to develop such a resource are not easy to justify. This is because they have an uncertain future value, and their full potential will only be realised once enough data of the right quality has been entered, and the right organisational culture is cultivated to ensure organisation-wide maintenance and use of the resource. This is true especially for small and medium sized enterprises (SMEs). Successfully

implemented, sophisticated, in-house KM systems are therefore for the relative few. These products can be extremely costly, require expert installation, continuous development, and more often than not require an organisational mindset change before anything that even looks like ROI can be considered. According to Bain & Company's survey (Rigby, 2001) of management tools and techniques, these tools glean very poor (2nd lowest ranking out of 25 tools studied) ratings in the way of satisfaction from those utilising them - in fact this study found that more respondents were actually dissatisfied than were extremely satisfied with these systems.

For those organisations that are considering whether to have an IT-based KM systems, it is important that they correctly identify their information needs, and ensure the system selected or developed can meet these needs in terms of storage, maintenance, accessibility and utilisation. Bearing this in mind, the resource discussed in this paper is an attempt to provide a centralised knowledge base of benchmarking data and best practice information, that can be accessed by organisations, regardless of size and specialism, in order to help them achieve process and performance improvement. The following explains why such a benchmarking-focussed resource was considered necessary.

3. BENCHMARKING FOR PERFORMANCE IMPROVEMENT

Benchmarking is an organisational practice of learning through comparing, in a structured way (Welch & Mann, 2001) that can cut through and across cultural, industry, size, and functional boundaries to identify usable high-performing practices and benchmarks. PricewaterhouseCoopers have stated that "*Benchmarking is the first step for identifying performance gaps between a business and its peers. Next, the gaps need to be analyzed to determine their underlying causes and to develop strategies and plans that address them*" (Anon. 2002a). Hill (2000) identifies several reasons that an organisation may decide to engage in benchmarking. These include:

- Avoiding beginning 'from scratch', i.e. since another organisation may have already developed an effective process or method.
- It facilitates the transfer of tacit as well as explicit knowledge.
- It creates a sense of urgency and accelerates change by using tested and proven practices.
- It helps identify performance gaps between your organisation and others.
- It helps the organisation develop and set performance goals for its employees to achieve.
- It helps to establish realistic objectives.
- It encourages employees to be continuously innovative.
- It creates a better understanding of your industry.
- Because it is a process of continuous learning, benchmarking will emphasise sensitivity to the changing needs of your customers.

Studies place UK company involvement in benchmarking at 60%, 78% and 85% (Zairi and Ahmed, 1999, Coopers and Lybrand, 1995 and the CBI, 1997 respectively), and a European study in 1994 suggested that 88% of companies were involved in benchmarking activities (Voss *et al.*, 1997). In the US a similar level of involvement was recorded by Bain & Company's 2003 international management tools survey (of which 60% of respondents were US) indicated that 84% of organisations used benchmarking (Rigby, 2003). In spite of the evident wide extent of the approach, evidence from recent surveys (TBE, 2001; MED, 2002) suggests that most users of benchmarking will be involved in comparisons of performance metrics rather than the more rigorous style of process benchmarking. What is often overlooked, mainly due to the general lack of education in benchmarking, is that it is "Process Benchmarking" which looks at the system delivering the outcomes, that has potentially far greater returns in terms of achieving continuous and breakthrough improvement.

Problems in benchmarking

There are several key issues that both inhibit organisations actively involved in benchmarking and prevent others from attempting active involvement. In a survey of 559 UK respondent organisations (Hinton *et al*, 2000) findings indicated that among some of those involved in benchmarking there were difficulties encountered during the process. These difficulties included: finding suitable partners; difficulties in comparing data; resource constraints (time, finance and expertise), and staff resistance. The main reasons given by respondents for not being involved in benchmarking at all, were: ignorance (5%); resource constraints (25%); data comparability (29%); being 'too small to gain' (15%); considered not appropriate (26%). Staff buy-in, financial constraints, and lack of skills and expertise were also found to be the underlying inhibitors affecting benchmarking take-up in the Kidwell study. These inhibitors were also common to those found more recently among the South African financial sector companies. Here, difficulty in finding partners and of getting information from competitors was the most prevalent (85% and 100%), cost and lack of skills were also key inhibitors. Notwithstanding these difficulties 100% of the survey respondents recognised the value of benchmarking to their company (Vermeulen, 2003).

Mindful of problems such as those revealed by these studies, the Centre for Organisational Excellence Research (COER) recognised a service gap in this area and the potential value to organisations of providing a broad-scoped internet-based knowledge resource, based around the activity of benchmarking and business improvement. This would enable both large and small organisations to draw upon a centralised base of information in relation to best-practice benchmarks and practices, with case studies indicating their appropriateness and usefulness within certain contexts.

4. THE BENCHMARKING AND PERFORMANCE IMPROVEMENT RESOURCE

Between April 2000 and April 2002 a team of researchers at COER developed the website resource based around business excellence, performance measurement, management/improvement tools, and benchmarking to assist organisations worldwide to better manage their processes and systems and improve their bottom line. The resource itself is a conduit through which to supply individuals and organisations with valuable information in return for revenue that is used to fund more business research within COER. The key operational objective of the website is to offer relevant and comprehensive performance improvement data, knowledge, and guidance on a broad range of topics to individuals and organisations around the world that are looking to improve performance.

The development

Pre-launch development of the BPIR involved soliciting opinions from industrial contacts and audiences on both the preliminary design concepts and the ongoing direction of development. The sheer scale of the BPIR information offerings has not been able to be achieved without making many partnerships. An extensive network of partners has been formed and has helped the resource to provide key services in the way of these growing and evolving dimensions;

- Downloadable self-assessment tools.
- Nearly one thousand generic measure examples complete with formulae and explanation, many of these having a key commentary on 'why, how, and what to do', and associated benchmarks of performance from all over the world.
- Full access to over 600 searchable business journals/magazines from around the world - well over 150,000 complete full text articles along with a sophisticated search engine.

- Hundreds of management/quality tools and techniques many with suggestions on implementation and most with case study examples of the tools in action, the benefits gained, and or surveys showing trends of their use.
- Collections of ‘expert’ opinion articles on strategies, tools, techniques, and issues.
- Hundreds of surveys and studies revealing trends across and within diverse industries.
- Details of thousands of high-performing potential benchmarking partners, all of which have won awards for their performance in one area or another.
- Thousands of case studies illustrating best practice.
- Real life examples of documents – policies, memos, internal newsletters, management guides, internal reports, forms and plans.
- Competitor analysis through tracking the tools and techniques used over the years by specific organisations
- Reviews of related websites
- A service for members where research requests are submitted and the results delivered monthly via email.

As the above list illustrates, the problem for the BPIR was how to structure this vast array of data, so that it becomes useful information for the user. As Newman (1997) points out, “...*data exists in infinite volume, but its transition into information remains problematical [...] information only exists when we can either see or create patterns within the field of data*”.

Structuring the data

The benchmarking process is defined within COER as comprising the following key steps: (1) Understand and measure, (2) identify areas to improve; (3) collect data, (4) compare and learn; (5) implement improvement strategies; (6) monitor and repeat. The web resource was designed to mirror this approach, offering information to assist in each step of the process. The BPIR’s homepage and navigation tool used throughout the resource is shown in Figure 1. The “BPIR Improvement Cycle” emphasises and encourages the use of a systematic improvement process. In the screenshot, the segments represent the main activities of the process and the outer annotations indicate the associated services or information that the BPIR supplies to assist these activities. Each service link around the outside of the BPIR cycle takes the user to specific databases where relevant information can be found, searching can be carried out by key word(s), or, alternatively the services can be filtered through the smallest criteria of the Baldrige or EFQM models (or a simple Process Classification Framework). This is carried out by entering through the *Best Practice Model Database*. BPIR subscriber Julie Hutton, the Group Quality Manager of *Careers Management*, recently commented:

"We really like the way we can focus the resource down to the smallest criteria of the EFQM model as we have a strong focus on self-assessment using the model within our organisation. Once we have identified our areas for improvement we use the BPIR to help find ways to improve in these areas using the case study and activity materials".

Business excellence models such as the Baldrige ‘criteria for performance excellence’ (CPE) and EFQM model were chosen as key frameworks for the resource. This is because of their well-documented success in helping organisations achieve world class performance. In particular, COER believes that the CPE provides one of the most comprehensive holistic approaches to examining processes, their interdependencies and influence on bottom line performance. Other popular models such as the Balanced Scorecard, Performance Prism, and Logic Model attempt to do parts of what can be achieved by the CPE, but without the established and extensive support structure that is available to educate those new to the concepts.

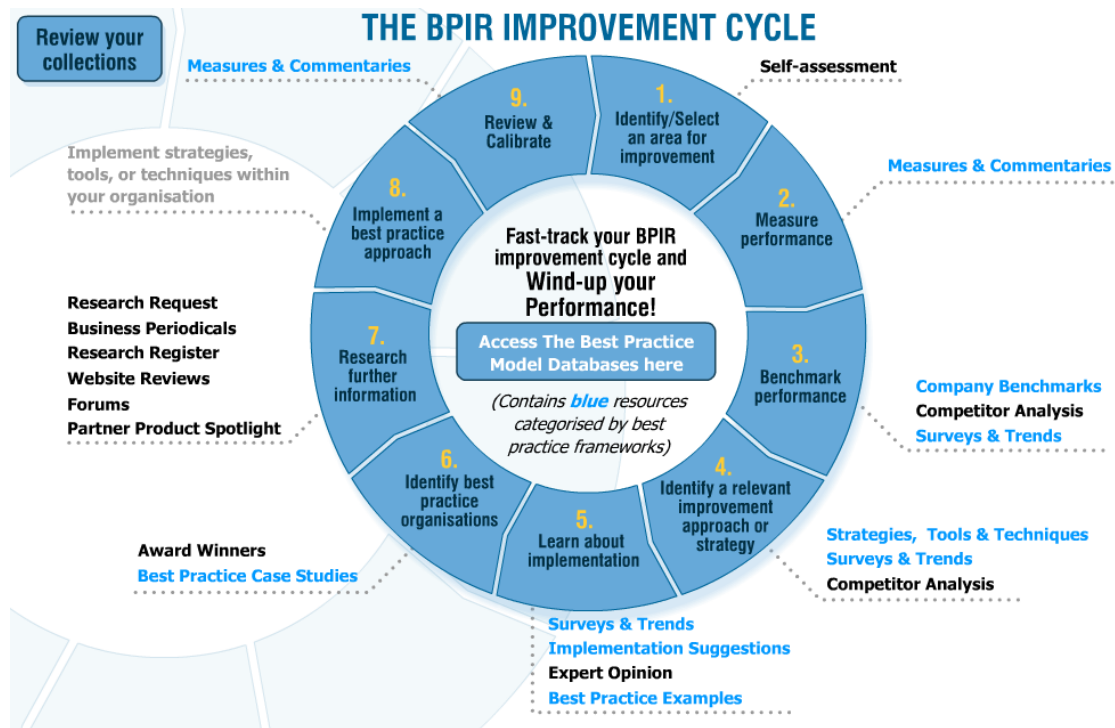


Figure 1: BPIR’s improvement cycle showing key services/information types available to support each activity in the cycle

The BPIR cycle is an adaptation of Codling's (1996) 12-stage benchmarking process. In the initial design stages the 12-stage benchmarking process (see the core of Figure 2) was used to identify potential information that could be used to assist the benchmarking process (the outer circle). Figure 2 was then adapted to become Figure 1 after feedback from BPIR users and consideration of the type of improvement information that had been collected.



Figure 2: Codling's diagram adapted to show the stages supported by the BPIR

During early stages of development, substantial research was carried out by COER among published evidence to validate its choice of benchmarking and business excellence as tools upon which to base the structure of its resource. Some of the most compelling evidence for the use of benchmarking was its widespread popularity, potential ROI, and the factors that often inhibited the full value being gleaned from benchmarking projects. More recently the Trends from the PricewaterhouseCoopers/BSI Global Research "Trendsetter Barometer" survey (Anon. 2002b) have vindicated COER's conclusions about the need for its BPIR, in this survey CEOs interviewed provided strong support for the value that can be gleaned from broader scoped benchmarking databases. The success of the resource is evidence through a 90%+ renewal rate from the first half of its second year of operation. The BPIR is currently used by over 800 individuals and 400 organisations from fifteen countries.

5. DISCUSSION

In terms of the KM spectrum developed by Binney (2001), the BPIR resource applies mainly at the levels of process KM and developmental KM. It has a lesser, although potential role to play in innovation and creation KM. At the process KM level, BPIR acts as a central repository of worldwide best practices, including definitions, measures, and case studies, and opinion orientated articles. Its structure is based around an improvement cycle, which if followed by the organisation can provide a logical sequence of stages for improving performance, together with the relevant tools, techniques and metrics to facilitate the process. The use of the cycle will produce deeper understanding of the continuous improvement process within the organisation. Thus, the knowledge base of the organisation will increase in terms of knowing how to approach improvement, and what specific measures can be applied. In terms of developmental KM, the BPIR can be accessed by individuals within the organisation to increase their own knowledge and understanding of best practices. In this sense, the BPIR becomes a useful support to education and training in developing the intellectual capital of the firm. In terms of innovation and creation KM, its value would lie in its use by improvement teams in directing their activities and choice of measures and approaches.

6. CONCLUSIONS

The effectiveness with which BPIR achieves its aims depends upon the extent to which subscribers utilise the information that it contains. Its potential value as an enabler of internal organisational improvement derives from its unique classification of information through non-prescriptive best-practice self-assessment models such as the CPE (that in many cases the users are already familiar with), and thousands of associated real-life best-practice examples. Of importance is that the BPIR has a key strategy to regularly engage the user in interactions to stimulate learning through its forums, newsletters, and through its research request facility. Finally, the fact that it is web-based, and therefore generally accessible to a range of organisations and also to groups and individuals within those organisations, is significant. This last reason reduces its cost to organisations and addresses the problem outlined earlier in relation to IT-based KM systems.

To make effective use of a resource such as BPIR, the organisation of course is required to create the necessary time for users to interact with it, or even build it formally into the improvement cycle. Use of this 'enabling technology' therefore becomes a component of the internal KM strategy of the organisation. In keeping with the innovation and creation category of KM, the organisation must create the conditions within which its potential is maximised.

This year the first detailed customer assessment will be carried out in order to attempt to build objectively onto the positive feedback received so far and assess the effectiveness of BPIR as a knowledge management resource in achieving performance improvement. This research will indicate how the organisation barriers that *may* exist in enabling such resources to be most effectively used, have been surmounted by BPIR users.

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