

BENCHMARKING AND BEST OF PRACTICE - TOOLS FOR PRODUCTIVITY ENHANCEMENT WITHIN THE INDUSTRY

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Abstract: Businesses in graphic arts industry are becoming more complex and competitive. To strive for better performances in each process within the business is essential. There are two interesting methods for this, "benchmarking" and "best of practice". Benchmarking is used for internal work to structure the continuous measurement and improvement of key processes. Best of Practice is a method to compare similar companies with each other to be able to learn from each other on what parts of the process is regarded as above or under industry average.

Production processes in the graphic arts industry are becoming more complex, time-critical and physically integrated. In a digital world this put new demands on management and creates new possibilities of intersystem integration. The necessary IT infrastructure is available today, but the mechanisms for interchange of management information are not standardized. IFRAtack is one such mechanism that can let us more seamless integrates different systems. A key to succeed in benchmarking is to automate the collection of data. We cannot afford to manually collect data, which also is not that reliable as automatic gathering of data.

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INTRODUCTION

The graphic arts industry and specifically newspapers are tending to use internal benchmarking processes to increase productivity and revenue. This paper will discuss different benchmarking approaches used within the newspaper industry and also how the process could be improved by using integrated systems for collecting data. The newspaper companies are today highly integrated with computerized pre-press departments and highly automated printing presses and mailrooms, combined with distribution management system this is today one of the biggest revolutions in the newspaper industry [Stenberg 1997]. However, total production management using computer-based tracking and planning systems is still rare. In the future, pre-press, press, mailroom and distribution control systems will be linked to administrative and financial system to form an integrated newspaper production management system focusing on customer-to-customer satisfaction.

Benchmarking is a technique to guide a company to set up internal processes so that they can be measured and compared over time. Dr Kotler defines benchmarking as "the art of finding out how and why some companies can perform task much better than other companies" [Kotler 1994]. This can also be referred to as "best of practice" when in such cases two or more companies are compared. In this paper we do not separate benchmarking from best of practices. Thus can we separate internal and external benchmarking where this paper focuses on internal benchmarking.

This paper also discuss four approaches of benchmarking used within the newspaper industry from: Australia "the Fairfax printers model", French Organization for 12 biggest papers (GGR), German Regional Newspapers, and South American GDA. These are only some examples of the multitude of different approaches that can be found.

This is then discussed from a user point of view, a newspaper that want to refine internal benchmarking processes without driving cost. One important aspect is how to gather raw data in a more automated manner like using open system and defined information exchange tools like IFRAtack [Fällström 1997]. In this process In this process we defined some important aspects and issues that should be focused, e.g. business wide perspective, financial, production and customer satisfaction.

BENCHMARKING BACKGROUND AND TECHNIQUE

During the 1980s the American company Rank Xerox realized a sharp decrease in growth in revenue and profit. Realizing the gravity of the situation, Xerox decided to take action. They decided to measure the company against other companies in many different areas. Xerox decided to embark on a program that would make them the first American company to employ benchmarking [Kahaner 1996].

The competitive benchmarking process at Rank Xerox was an intense, in-depth study of what they thought was their best competition. It was a continuing, never-ending process, an integral part of the new and stronger emphasis on quality. Every department at Xerox should be benchmarking itself against its counterpart department at the best companies that Xerox competed [Zairi 1998].

The benchmarking process involves the following seven steps [Kotler 1994; Kahaner 1996]:

- Determine which functions to benchmark**
- Identify the key performance variables to measure**
- Identify the best-in-class companies**
- Measure performance of best-in-class companies**
- Specify programs and actions to close the gap**
- Implement and monitor results**

To begin with, it is important to overlook what information that is already available within the company. To be able to compare yourself with others, it is important to know everything about your internal processes.

Some companies choose to benchmark against the best in their industry. Another way is to benchmark against the best-in-class companies in other industries. An example of this is Motorola who wanted to improve the cycle time between order receipt and delivery of its cellular telephones – they contacted Domino's Pizza, a clearly leader in fast deliveries [Kahaner 1996].

Once a company commits to benchmarking it should focus the efforts on primarily on those critical tasks that deeply affect customer satisfaction, company costs, and where substantially better performance is known to exist. Some processes are easy to quantify in benchmarking; products produced per employee, errors per product, and transactions per person.

The information that is collected during the benchmarking should be used to improve the own business - the new knowledge should be implemented. The benchmarking project is not a one-time event. It should be a part of an ongoing program of learning and improvement.

Benchmarking and ethics

Benchmarking is simply the art of finding out how and why some companies can perform their tasks much better than other companies [Kotler 1994]. Unlike industrial espionage, benchmarking is a win-win principle. Benchmarking is concerned more with finding out about ideas on managing processes rather than costs, pricing etc. A golden rule in benchmarking is only to ask for information that you are willing to give yourself. If you are uncomfortable revealing a piece of information, do not ask your partner for it.

It is a clear dividing line between benchmarking and industrial espionage. Industrial espionage is an unethical, obsessive way of obtaining information at any cost. It is about breaking the rules of fair competition, sabotage or mislead customers in order to create a win-lose situation.

THE FOUR DIFFERENT METHODS STUDIED

Australian model

The Fairfax Printers benchmarking model performs both internally and externally. Internal benchmarking aims to measure one's own performance with the aim to maintain achieved goals and a continuously learning. External benchmarking aims to assess the performance in regards to other companies (e.g. printing facilities).

During a benchmarking project it is important with confidentiality - release of certain information can be harmful in a competitive market. IFRA and NAA will here provide information, guidelines, do analyzes and compile a list of items which are suitable for benchmarking.

The items that are benchmarked are then scored. This scoring makes it possible to compare a manufacturing plant with another. To do that it is important to take relevant variations into account. The formula that is used is:

$$\text{Benchmarking Newspaper Facility} = \text{Score (avg)} * \text{Relativity (avg)}$$

This model is supposed to be a repetitive concept where newspapers can measure themselves and continuously assess their positions. It is supposed to be used as a tool to manage change.

French model

In France G.G.R is doing a benchmarking project on the 12 biggest regional newspapers. The factors that are benchmarked are advertising revenues, circulation revenues, number of employees, wages, paper use, daily paper, printing productivity, presses ratios. In the future they will also benchmark pre-press (technical and organizational), color quality in advertising products and numeric exchanges of files.

Process	Paid hours	Products	Process productivity	Productivity / copy
Platemaking	MP 672	No. Frames P 3 520	Plate productivity MP/P 0.04	NET x 1000 0.06
		No. Exposed plates P 15 680	Plates / Frames P/P 4.06	
Printing	MT 3136	No of printed copies Pages P \$ 302 505	Printing productivity MT/Printed 0.007	NET x 1000 0.38
		No. CI printed pages P 1 600		
Mailroom	ME 3136	No of days JH 28	Mailroom productivity NET x 1000 0.38	NET x 1000 0.38
		Printed circulation UP 293 000	% used circulation (UP/MT)/J 0.95	
Total	MP+MT+ME 6944			NET x 1000 0.64

- MP = No of hours in plate dept
- MT = No of hours in printing
- ME = No of hours in mailroom
- JH = No of hours in platemaking, printing and mailroom
- P = No of frames
- P = No of exposed plates
- J = No of copies
- P = S = No of pages
- MP = PS = No of printed pages
- JH = MT = No of days in production (month)
- A = UP = printed circulation

Figure 1. Example of a view from the French model of benchmarking.

German model

The project is called "Success Factors Regional Newspapers" and started in the end of 1992. The goal for the project is to disclose profit potential of daily newspapers and to support transparency and confidence in decisions. The project also wants to help realize revenue and cost structures, understand and disclose competitive advantages/disadvantages, examine the efficiency of structures and processes of organizations, and make possible a discussion and define benchmark.

The general conditions for the companies that participate in the project is that they have different organization structures, they have to cope with heavy changes in technology and organization structure and they are at different level of development regarding commercial systems.

The approach in the project is:

- **Joint definition of functional areas.**
- **Development of strategic success factors.**
- **Gathering information/data from participating companies.**
- **Feedback on key figure pool to all companies.**
- **Assessment of the optimal cost positions.**

South American model

The object with the benchmark project is to the results of a questionnaire in a condensed and uniform way. The questionnaire is divided in two parts – Economical and financial data and personnel.

In the first part in the model the benchmarking project assess items as:

- **Sales (advertising, copies).**
- **Costs (newsprint, ink, transportation, outsourced printing, personnel, amortization, taxes).**
- **Income (Financial, other business).**

In the second part of the model the following are assessed:

Personnel (number of journalists, costs of journalists, cost rate to produce one page, number of photographers, number of photos taken, number of infographers, number of support employees, hour of training per journalist, cost of news services).

More work done

These four models represent a good average of benchmarking initiatives being done in the industry. It is important to note that many more are in use.

DISCUSSION

A Company would be amiss to look only inside when it is trying constantly to improve its performance. The enemy of benchmarking is NIH – “not invented here”. Benchmarking remains one of the best sources of ideas for improving quality and competitive performance [Kotler 1994].

The four above models are good examples but more models and techniques are used in many ways and in different organizations and newspaper groups. IFRA/NAA Production Effectiveness Benchmarking Project is currently under way, trying to establish a common model. Newspaper wants to continuously improve and become more profitable and further serve customer needs. But how to measure and set these goals is the question for many companies.

- **How to establish a benchmarking process and organization that covers Customer, Financial, Knowledge, Process and Production aspects.**
- **Need a technique to be used internally as well as externally, therefore we looked for industry accepted models.**
- **Time independent was also a critical issue as well as that the model should handle both printed and web-published products.**

For these to come true it is important to set up organization, responsibilities, and to choose model and define systems involved. Productivity measurements should then be formalized, focus on factors that can be collected and automated utilizing the IT-infrastructure. Demand open system, e.g CIP3 and IFRAtrack [Nordqvist 1996].

To implement benchmarking it is important to work in parallel but focus tasks. In the case pilot at GP the start was in Financial using Balanced Score Cards, for internal benchmarking of group wide data per month.

The conclusion that can be drawn is:

- **The tools are the model, organization, technology used and the use of continuous improvement processes.**
- **Responsibility for each factor (benchmark) must be clear and well defined.**
- **Development of used factors, measure the reality not for just the sense that this should be measured.**
- **Be able to identify new factor to include in benchmarking.**

- **Be able to implement these new factors in the system.**
- **Information to the organization, to who, how and when.**
- **Establish benchmark committee.**
- **Lobbying, create an understanding and participation.**

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LITERATURE CITED

- Fällström, F. 1997 "IFRAtrack 2.0 - a specification for the interchange of status- and management information between local and global production management systems in newspaper production", IFRA Special Report 6.21.2, Darmstadt, October, 21 p.**
- Kahaner, L. 1996 "Competitive Intelligence ", Simon & Schuster, USA, 300 p.**
- Kotler, P. 1994 "Marketing management: analysis, planning, implementation, and control", Prentice-Hall, USA, 801 p.**
- Nordqvist, S. 1996 "A Model for Global Production Management Systems in Newspaper Production — Real Time Management of Time Critical and Heterogeneous Processes", thesis for the degree of Doctor of Technology, Royal Institute of Technology (KTH), Stockholm, 220 p.**
- Stenberg, J. 1997 " Global Production Management in Newspaper Production and Distribution — Coordination of Products, Processes and Resources", thesis for the degree of Doctor of Technology, Royal Institute of Technology (KTH), Stockholm, 220 p.**
- Slimani, D. 1998 "A study of strategic management tools for the graphic arts companies", Thesis for the degree of Licentiate of Technology, Stockholm, Division of Media Technology and Graphic Arts, Royal Institute of Technology (KTH), 100 p.**
- Zairi, M. 1998 "Effective Management of Benchmarking Projects", Butterworth Heinemann, Oxford, Great Britain, 348 p.**