

# The implementation of practical solutions in logistic processes in companies familiar with lean management by means of benchmarking methods

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## Abstract

Benchmarking is a management method, which involves, among other things, improving the efficiency of an organization by identifying, analyzing, adapting and implementing solutions used by most effective organizations. Benchmarking has been successfully implemented in Polish enterprises. For several years there has been an increase in the importance of benchmarking, especially among companies possessing knowledge regarding implementing lean management. This article presents benchmarking as a management method, which allows eliminating waste and making better solutions in Polish enterprises. The article consists of two parts. The first part presents the theoretical concept of the nature, types, advantages and disadvantages of benchmarking, as well as the main waste which appear in the enterprise. The second part presents case studies of benchmarking, such as Xerox, but also four examples of companies in the Polish market in various industries (transportation logistics, manufacturing company, distribution company and company from the market of Transport Forwarding Logistics), that have implemented solutions perfecting logistic processes.

**Keywords:** benchmarking, lean management, company, waste.

**JEL** L53, M11, O32

**History:** Received 10 July 2014, revised 10 November 2014, accepted 1 December 2014

## Introduction

Benchmarking has been successfully implemented in some Polish enterprises. It allows to improve an organization by identifying, analyzing and implementing solutions used by leading companies in every aspect of the enterprise, including logistics. Today, many companies realize that in order to meet the demands of the client they should meet their expectations. This customer now decides what quality a product should be, where to be delivered and in what quantities. Many companies, especially those who possess knowledge on the topic, use or intend

to implement lean management, know where to look for waste and how to eliminate them. Losses can occur at any time of process flow of products and information from suppliers through production to final customer. These companies are trying to eliminate all the things that do not add value from the customer perspective by learning and searching for the most effective solutions and organizational methods of other companies in any industry. In Poland during the last few years intensification of benchmarking could be observed. Many companies are working together to develop the best solutions. In addition, many organizations have signed consulting contracts with companies that invite representatives of other companies for the so-called benchmark

tour. With such visits companies can exchange experiences, enhance knowledge, in order to see what effects can be brought by using different tools and implemented improvements in companies from various industries.

This article presents benchmarking as a management method that allows to eliminate various wastes and create better solutions in Polish enterprises. First, the theoretical concept of the nature, types, advantages and disadvantages of benchmarking, as well as the main waste which appear in the enterprise are presented. Then, some case studies of benchmarking are presented from- Xerox as well as four examples developed by the author of companies in the Polish market from various industries that have implemented solutions perfecting logistic processes. Through benchmarking, solutions used by competition or solutions derived from other firms increased efficiency and effectiveness of processes, these enterprises increased customer satisfaction, which in turn enabled them to achieve a particular competitive advantage not only for the Polish market. Some companies are aware and know what effects can be achieved through the implementation of lean management solutions.

### **Benchmarking – the concept, the essence and types**

Benchmarking is a method of management, which had a number of definitions. One of them says that it is a process of improving the efficiency of the own organization by identifying, analyzing, adapting and implementing the solutions used by the most efficient organizations in the world. Philip Kotler (2005) defined benchmarking as an art of exploring how and why some companies are better than others. The Polish author Zbigniew Martyniak defines benchmarking as (Martyniak 1996: 303-304):

- learning from the best companies by comparison with those organizations;
- search for the most effective for a given business solutions and organizational methods that allow the company to achieve a competitive advantage;
- comparing the processes that are involved in the design, manufacture and logistics of products or services from those of com-

petitors and the best companies in the industry;

- continuous assessment of the products, services and results of the company related to the methods and procedures and manufactured products or services in terms of performance by the leaders in the industry;
- search for standard practices by learning from others and use their experience.

The aim of benchmarking is to improve the effectiveness of the specified function, process or specialty. Benchmarking creates value and allows among others for (Brilman 2002: 263):

- setting ambitious targets,
- acceleration of the rate of change,
- overcoming reluctance to ideas coming from outside of the company, going outside,
- identifying the main processes,
- increasing customer satisfaction and competitive advantage,
- diagnosis of own strengths and weaknesses by more adequate self-esteem,
- building a climate of agreement on facts and on reaching the consensus,
- raising skills in the management of the corresponding measures,
- introduction and use of other management concepts as lean management, kaizen, reengineering, TQM, organization of learning, Time Based Management and others.

Benchmarking should not be confused with comparative analysis (*see Table 1*). Benchmarking as opposed to comparative analysis is trying to find the reasons for the differences, a solution that will allow the company to achieve excellence.

**Table 1. Differences between benchmarking and comparative analysis.**

Feature	Comparative analysis	Benchmarking
Main goal	keeping step	– prediction and ahead of the competition – achieving excellence
Methodology	– measurement applications – compare the cost of – define deviations	– understanding the principles – comparison of processes – identification of solutions
Scope	– direct competitors – comparisons within the sector	– comparison between sectors – competition analysis and companies which are not competitors
Sources of information	– sector analysis – competitors	– the best companies in the field
The scope of subjects	– all the action – organization/product	– the entire organization – method – process – function
Rules	– external research – the activities carried out by the Board of Directors	– study of inside and outside the company – the full commitment of senior management – the participation of all employees

Source: Dąbrowska-Mitek (2008: 27).

Benchmarking can have a strategic, procedural and marketing nature. It has a strategic nature when a company is compared with leaders in the industry. It is procedural when a company is compared with the leaders of any industry, leading in various fields of activity. Benchmarking the company from the point of view of marketing means systematically examining and comparing the opinions of the competitors, the quality and the essential characteristics of the product.

In the literature of the subject, one can find a lot of benchmarking criteria for classification (see Dąbrowska-Mitek, 2008). One of them is the breakdown into subjective and objective criteria by Bjorn Andersen. A detailed breakdown of the two criteria is presented in Table 2.

**Table 2. Types of benchmarking by B. Andersen.**

Criterion	Type of benchmarking	Object of interest	The reference point
Benchmarking entity (company reference)	internal	operations	the same organization (another department, subsidiary, department, foreign branches)
		processes	
		methods	
		objects	
	competitive	method, process	direct competitors
		product, services	
		Functions	
	functional	similar functions	company's non-competitors in the same sector
	general	processes and working methods	companies from different economic sectors
		services, products	
Subject benchmarking	results	data indicating the level of efficiency of the organization (both in terms of economic and operational)	other companies in the sector
	processes	processes and procedures	various organizations
		ways to exploit and organizing processes	
		methods of organizing processes	
	strategic	processes and procedures	leader in the industry market leader
		main products	
		strategic	

Source: Dąbrowska-Mitek (2008: 30),

As with any management method, benchmarking has many advantages, but it also has disadvantages, which are presented in Table 3.

**Table 3. The advantages and disadvantages of benchmarking.**

BENCHMARKING	
ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>– identifies appropriate for the implementation processes</li> <li>– affect the improvement of processes implemented in the company,</li> <li>– allows to increase customer satisfaction,</li> <li>– allows to deploy newer methods of management, such as just-in-time, TBM, reengineering, lean management, kaizen and others,</li> <li>– improves the metrics and indicators used in the enterprise,</li> <li>– helps to eliminate the effects of resistance to change inspired by the surroundings company,</li> <li>– increases the effectiveness and efficiency of processes,</li> <li>– creates ambitious goals,</li> <li>– encouraged to make changes, process improvements in the company,</li> <li>– allows to determine future trends and developments,</li> <li>– helps in determining priorities for the improvement of many activities,</li> <li>– allows to gain a competitive advantage.</li> </ul>	<ul style="list-style-type: none"> <li>– perception of benchmarking as espionage or economic intelligence,</li> <li>– inhibit creativity by copying the actions of other companies,</li> <li>– rise to much better product or service compared to a competitor,</li> <li>– company during the reference change can bring to the market more innovative solutions,</li> <li>– reference company ceases to be a leader in the market,</li> <li>– difficulties in obtaining information,</li> <li>– difficulty in choosing a partner benchmarking,</li> <li>– costly and labor intensive methods,</li> <li>– does not guarantee an immediate effect on the positive results often need to wait any longer.</li> </ul>

Source: author's own elaboration based on Zimniewicz (1999), Brillman (2002) and Grudzewski, Hejduk (2004).

### **Benchmarking history – beginnings and Xerox example.**

The main idea of benchmarking developed at the beginning of the twentieth century. At slaughterhouse in Chicago Henry Ford was inspired by half-carcasses subsequently transported on special hooks, what he later introduced in the factory as the assembly line. In the 1950s Toyota started to use benchmarking. Taiichi Ohno, Toyota's director during his visit to the United States, noticed the method of shelves replenishment in the market, what later was introduced in his factory as the principle of kanban cards. It is widely used nowadays by other industries in different countries of the world. The origin of benchmarking in its current form goes back to the 70s of the twentieth century. Xerox Corporation started to lose market share to the benefit of Japanese companies that offered lower prices. Xerox's market share in the years 1976-1982 decreased from 82% to 41%.

Then the company (since 1979) decided on the so-called, competition benchmarking. The management developed a three-part program named Leadership Through Quality, the second part was called Benchmarking. Standard logistic solutions were adapted from experienced at LL Bean (since 1981), the global leader in the distribution of sporting goods, metal sheet bending methods from Toyota as well as other companies, like American Express, Mary Kay Cosmetics and others (Brilman 2002: 261).

L.L. Bean company had the best organized warehouses, which allowed three times faster execution of the contract, had better indicators of warehouse productivity as opposed to Xerox. In order to plan future actions to improve the flow and operation of storage facilities, Xerox compared various measures of warehouse productivity (*see Table 4*) and implemented the best solutions used in the process of storage in their warehousing (*see Table 5*)

**Table 4. Comparison of the productivity of operations at Xerox and L.L. Bean.**

	Statistics from February 1982.	L.L. Bean	Xerox
Only for download	Number of orders per day	550	117
	Number of product lines per day	1 440	497
	Number of pieces per day	1 440	640
Entire warehouse	Number of orders per day	69	27
	Number of product lines per day	132	129
	Number of pieces per day	132	616

Source: Kisperska-Moroń (2000).

**Table 5. The best solutions in the storage industry.**

Steps in the process of storage	The best solutions
Reception of products into store	Computer registration accepted products, providing information about the status of the inventory with a portable computer terminal in the reception section.
Delivery to location	Determined in advance, but not systematic location minimizing the distances covered. 100% verification of product location in stock by statement location of the rack with a barcode.
Download products from the store	The current interactive on-line scheduling to minimize those routes that retrieves and maximize the degree of use of the shipping container.
Movement of stocks	Automatic movement of items of inventory in accordance with the daily number of orders.
Replenishment	Auto-complete each area download products from a reserve in the previously established lots or on a regular basis after the download.
Shipping	Automatic sorting of collected products to the appropriate carrier by scanning labels. Automatic preparation of shipping documents based on previously scanned labels and scales.
Other preparations	The current (real time) updating inventories based on transactional systems and control for storage.

Source: Kisperska-Moroń (2000: 85).

After the introduction of many new solutions, not only in the warehouse, Xerox company reported better results. The most important achievements in various fields include, among others:

- reduction of inventories by two-thirds,
- drop in controls of supplied parts to less than 5%,
- quality growth – only 150 parts per million turned out to be defective,
- doubled increase in the number of drawings per person,
- increase marketing efficiency by one-third,
- reduction in service labor cost by 30%,
- increase distribution efficiency by 8-10%.

### **The main types of waste in the enterprise and typical measures of logistics.**

Benchmarking is a method that can be successfully applied in every aspect of the company, not only in logistics. This is a method, which allows to find ways to eliminate wastes. Lean management method assumes that in the company, both manufacturing and service oriented, some activities can be identified as increasing the added value. But also regarding those which cause loss, it is important to be able to identify and eliminate common sources of waste, which in the long term could have implications for supply chain management, efficient and effective flow of materials and information, appropriate use of available

resources. Losses may arise in the organization at every stage, from the acquisition of raw materials, through the manufacturing process and ending with the delivery of the finished product or the customer service. According to the definition of waste, it is any action resulting in increased costs and time, but do not add value. Losses may arise for example from the difficulties in communication between employees, from redundant activities, from bad relationships with suppliers or customers, or the unnecessary expenditure. Different types of waste can be identified. Taiichi Ohno distinguished seven of them including among the others (Piasecka-Głuszak 2009: 378-379):

- overproduction – producing more materials, parts or products than the result of the demand in a given period, which may contribute include to increase the cost of storage and transport, the risk of aging or loss of value of the product requires additional work labor and machinery;
- stocks – they generate storage costs, they are frozen capital and most of them are the result of overproduction, or an erroneous decision on the quantity ordered stocks; optimization of inventory control is most often on minimizing the cost of creating and maintaining inventories, which helps to make the right purchasing decision;
- repair/scrap, improve – the need to repeat the process, re-treatment, frequent changes in projects, excessive bureaucracy – all generate additional costs; deficiencies interrupt production and require rapid, costly repairs, and poorly manufactured products can cause enormous losses in the form of refunds from clients or the supply dump, which is associated with a waste of resources and effort of employees;
- movement – each additional, unnecessary movement of the operator, turn, unnecessary step, or improper placement of machinery and equipment causes a waste of time employees, as well as machinery and equipment;
- processing – inappropriate technologies, poor selected process parameters, lack of coordination, combining surgery, bad flow of information – all this generates additional costs;
- expectation – due to the lack of liquidity of the process, the wrong balance operator and the machine, the worker waits due to such failure or lack of parts, or when just watching the machine;
- transport (internal) – moving products does not add value during transport in the enterprise may cause damages and therefore, should seek to minimize transportation costs by selection of the shortest path, unidirectional and continuous flow of cargo without recurrence and intersections, or eliminate unnecessary transport and handling operations.

In the literature one can find other types of waste such as untapped human potential, unnecessary consumption of media, redundant control or too large consumption of materials.

The subject of benchmarking can be every process and function in the organization, in the industry. These can be procedures and processes, costs, functions, organizational structure, strategies, products of other companies, third-party services, principles, methods, techniques, tools and methods of management (e.g. customer, market, information, personnel, finance) used by others, as well as various indicators and measures, including logistic ones. Typical logistic measures include among others (Kisperska-Moroń 2000: 89-98):

- indicators of sourcing and purchasing – the quality of delivery service (e.g., delivery, reliability of supply, flexibility of delivery, claimed delivery, late delivery), the efficiency of delivery (delivery frequency, regular supplies, completeness supply), evaluation of employees engaged in the purchase (work efficiency);
- indicators of storage – indicators of work in the warehouse related to organizational and technical efficiency (e.g., volume of trading of stocks, the time of adoption, and transshipment of goods, the use of storage space, the number of owned stores, the average freezing of capital stock, the value of the damage caused in the warehouse performance, the cost of

- storage, calculation of economic efficiency of warehouses modernization;
- indicators of production – these are different indicators targeted, among others, to minimize inventories of work in progress, timely completion of production, shortening production cycles, production rhythm, quality of production);
- transport measures – indicators relating to inter alia, efficiency of the transport base (technical readiness index, the average load of the vehicle), the use of the transport base (the rate of utilization of rolling stock, the average delivery time), working conditions of rolling stock (rolling course, the number of rides loaded), the efficiency of rolling stock (the utilization rate of progress, the rate of capacity utilization);
- indicators of distribution – including the volume of orders, the average cost of orders, the average turnaround time, average delivery time, ready van, security of supply, the share of irregular supply of products, the share of delayed supply of products, the share of returns supply of products, the share of re-supply, the share of supply of products advertised;
- measures of customer service – order cycle time, inventory availability, limited size, the complaint system, the flexibility of the system, the cycle time of order, stock availability, quality of documentation, the full and timely performance of the contract.

### **Some examples of use of benchmarking in Polish enterprises**

#### **Transport**

An example of functional benchmarking in urban logistics is a company dealing with transport. The company operates in the field of transport services (supports a total of 18 trunk lines daily, including two suburban and two night lines), bus rental services, technical inspection of vehicles of all types, parking services, maintenance and repair of motor vehicles, replacement and repair of tires and marketing activities. Following the example of other companies in the larger cities, compar-

ing to the best ones, the company has introduced the optimization of transport aimed at improving public transport in the light of the achievements of other companies in the same industry. Developed on the basis of filling buses, the optimization was primarily aimed at:

- adjusting the offer to the actual needs of the residents,
- re-organizing the routes of communication lines,
- improving the attractiveness of the top lines, cutting overlapping and not popular lines,
- increasing the attractiveness of the offer, by introducing rhythmic circulation of frequencies based on modular, and synchronize time departures on the main strings,
- categorization of the lines in terms of frequencies,
- improving the efficiency of operations.

Modification of routes, i.e. elongation, partial change of course, lead to complete elimination of lines 6 and 7. The routes of 6 lines have been modified, while others have not changed. At the same time the frequencies were increased - priority lines (2 lines) and basic lines (4 lines) run every 10 – 15 minutes. On the main communication routes buses run every 5 minutes. For passengers who as a result of the changes made lost the ability to travel with a ticket valid for one line, a time ticker valid for 45 minutes, giving the possibility to change buses.

The effect of changes in the company was increased customer satisfaction, but also:

- reduction of number of vehicle-kilometers by about 4 percent (regarding the unit length of a route provided by a bus at a certain time (e.g., day, month, year, the chosen course, etc.),
- reduction in employment in the group of drivers by 8 (total reduction of 13 employees),
- reduction of cost of the company by approximately 500 000 00 PLN,
- removal of 7 units of bus routes with the highest mileage and the highest operating costs,
- reduction of operating costs,
- reduction of other costs.

The current state of the bus fleet is 63 units, which ensures the proper shipping services in urban and non-urban communication. Fulfilling the requests and suggestions of residents of the city, the company has introduced adjustments to schedules and the routes of some lines of communication, and is open to further changes and innovative solutions.

### Manufacturing enterprise

The Polish company X, employing 35 people, runs two operations, namely production and distribution of films and packaging materials. The company has a warehouse of 1200 sqm. At some point of running the business, it was noted that production activity leads to a loss while commercial activity by contrast makes profits. Despite the introduction of ISO and HACCP it was found that the processes are too complex and lengthy. Part of the processes and the rules were not well respected by the staff, which led to a decline in the quality of production and thus competitive advantages of the company and the lack of effectiveness of price competition. After analysis the company decided to make changes. Various changes have been made based on the example of different companies. Changes in the trade and logistics were based on experience of companies not only from the same industry but production itself, its specificity and characteristics were taken from companies in the industry. From their larger partners, the company introduced the production of longer series. Being flexible while maintaining the smallest losses in the production, is the approach of smaller companies that may regulate production to date. Good contacts with business partners and suppliers primarily allowed the company to effectively negotiate prices of raw materials adapting to the rapidly changing market. The introduction of the principle that a sales representative is at every stage of the customer from the product design up to ensure the implementation of the order and payment has brought many benefits. Years of experience of other companies allowed the company to select the appropriate patterns and adapt them successfully. The changes allowed for greater flexibility both in

the processes of the company and the approach to the same production, the introduction of the concept of "just in time", as well as shorten the waiting time for the execution of the contract. These changes result in increased levels of customer service. The company's customers are now satisfied, feel more noticed and can rely on the company from advice in choosing the right product to the solving urgent problems in the functioning of the packaging of their products.

Enterprise X modeled on competition applied among others:

- production of long series, because it turned out that the short series range of loss-making;
- production primarily in customer orders;
- ordering raw materials for production planned in the "just in time" – reporting on any deficiencies in the product in real time (reduces the risk of buying a more expensive raw material, or buying raw materials at the purchase price of the raw material by competition);
- production range of customers in the "just in time", without waiting time;
- order to secure raw materials production facility for a maximum of 1, 2 weeks, and safety stock;
- trade credit for firms adapted to their individual financial capabilities, the introduction of locks supply the arrears of payments;
- own transportation to the customer, which increased the flexibility of the company and the possibility of a rapid response to urgent needs of the client;
- use of outsourcing – the purchase of some products that a company cannot produce itself, to fully meet the needs of the client;
- introduction of ISO and HACCP certification along with recurrent re-certifications guarantee the quality, hygiene and repeatability, which proved to be important especially in collaboration with the pharmaceutical industry or the food;
- obtain a certificate of financial credibility "reliable company" and "transparent company";
- possible to carry out benchmark tour in the company, which gave the opportunity

to confront change with another company;

- an audit by the strategic and demanding customers in the company;
- opportunity to buy everyday goods such as seasonal or foil gardening or building even retail customers (organization of seasonal promotions);
- expert advice and the ability to transport the individual customer when ordering wholesale;
- expand the team of sales representatives offering products throughout the country and the EU.

### Contract logistics

Another example of benchmarking, which is the subject of benchmarking criteria, is company Y from the TFL market (Transport Forwarding Logistics). Company Y in Poland has more than 30 years history and is present in many branches throughout Poland. The company employs approximately 1,600 employees offering their services to domestic companies and multinational corporations. In Poland, the main business is contract logistics, which is associated with the transport logistics services and warehouse management (the company has warehouses and space of over 7 000 000 square meters in more than 65 countries). Its services cover all aspects of logistics planning, control and execution. Services performed by the company and main objectives include:

- providing products as close to the customers in order to improve service and reduce transportation costs;
- reducing operating costs through process optimization and targeted use of warehouse automation;
- controlling production costs and reducing inventory by creating a final product configuration in warehouse;
- controlling storage costs by sharing fixed costs with other clients of the company;
- online orders and controlling resources by the website;
- reducing the burden of managing multiple warehouse suppliers.

Company Y does not work with other companies to share experiences. It has own team

just for continuous improvement responsible for streamlining warehouse processes. People affiliated with the organization on a regular basis exchange their experiences, send their A3 reports and have a weekly conference call. In order to improve the knowledge of participants they take part in conferences about Lean and Six Sigma. Trainings are carried out by external companies and training topics include Effective project management, Data analysis in MS Excel, MTM methodology. The company operating in Contract Logistics must look after the welfare of the client's business. Therefore, also improvement workshops with the client are carried out. Many companies have their teams for continuous improvement and appoint representatives to other cooperating companies. Companies that do not have such teams often use the help of consulting firms. A good practice is a joined work of Black Belts from different branches. As part of the schedule individual persons in the branches within one working week have to change their location and work in another department looking at common problems from a different perspective. The company is co-operating with a company engaged in the business of consulting and implementation of improvements in market certificates for their Black Belts.

With such solutions, making use of the example of better branch offices, the entire corporation can count all points to increase competitive advantage, because everywhere it strives for: to meet the deadline of delivery, instant access to overall price (inclusive of "to-door" – delivered to the recipient), early planning and organization of transportation options, the ability to track shipments "door-to-door" in real time with appropriate information system and web browser-based exception handling for automated notifications and communications preventive and accurate and unified billing across all business units.

### Distribution

Enterprise Z is now one of the largest distribution networks of alcohol in the Polish market. It supplies retail stores and catering. The company has more than 50 branches throughout the country and around 200 sales representatives focused on the active customer service.

Good organization of work and the scale of operation allows for delivery within 24 hours of the order placed with a representative. Customers can choose from a range of thousands of products. A few years ago the company was taken over by another large distributor, who from the outset on the basis of their own experience and market competition began to make changes. First, the new system was implemented, which allowed, among others, automatic invoicing, billing customers on mobile devices by drivers immediately upon delivery, or faster time of delivery to the system. The changes resulted in a shorter turnaround time, greater customer satisfaction, reduce operating costs by reducing employment. For example, in one of the branches of the company there were employed nine drivers, seven persons invoicing, seven sales, fifteen warehousemen and after the changes there are employed seven drivers, three persons invoicing, five traders, twelve warehousemen. Costs have fallen by an average of 6 percent. The company fired sales representatives and created in turn a Call Center a department that was supposed to handle the phone market. Unfortunately, after a while it turned out that it was not a good idea for customers. Customers often require continuous operation, at the time of receipt of cash, exchange and receipt of the complaint, explaining and correcting errors in the supply and the rapid transfer of information on current promotions. Hence, an idea taken from another company turned out to be unsuccessful investment.

Another improvement inheriting from the competition in the industry and now from a company belonging to the network (through acquisition) introduced an e-invoice and store cross-docking. E-invoice contributed to the increase in the number of customers and turnover. Cross-docking warehouse has brought very large savings on logistics costs.

### **Concluding remarks**

The examples of use of benchmarking in Polish enterprises significantly contributed to the improvement of the processes carried out in

these companies. The action taken in each of these companies contributed significantly to improving results, indicators of the company. Any changes would not have been possible if the company did not have awareness of wastes elimination, did not know the main principles of lean management. The analysis includes companies that are familiar with the lean management approach. These companies know that by continuous improvements, one can reach his goals. The changes in these companies helped to reduce the necessary resources (people, space, infrastructure, time, capital expenditures) and at the same time made it possible to focus on maximum utilization of available resources and to adapt the company to the market conditions. Benchmarking in these companies triggered the current potential of the company, engaged employees to improve many processes, which consequently contributed to eliminate wastes, reduce costs, improve quality, implementation of the just in time method, shorten the delivery cycle, improve customer satisfaction, which in turn resulted in gaining greater competitive advantage. Benchmarking of these companies has accelerated the pace of development and allowed to face new challenges adapting to the rapidly changing market.

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## **Wdrożenie praktycznych rozwiązań w procesach logistycznych w przedsiębiorstwach znających lean management przy wykorzystaniu metody benchmarking**

### **Abstrakt**

Benchmarking to metoda zarządzania, która polega m.in. na doskonaleniu efektywności własnej organizacji poprzez identyfikowanie, analizowanie, adaptowanie i wdrażanie rozwiązań stosowanych przez organizacje najbardziej efektywne. Benchmarking wprowadzany jest z powodzeniem w polskich przedsiębiorstwach. Od kilku lat obserwuje się wzrost znaczenia benchmarkingu, szczególnie wśród firm znających, czy wdrażających lean management. Celem artykułu jest przedstawienie benchmarkingu, jako metody zarządzania, która pozwala wyeliminować marnotrawstwa i wprowadzić lepsze rozwiązania w polskich przedsiębiorstwach. Artykuł składa się z dwóch części. Pierwsza część teoretyczna przedstawia pojęcie, istotę, rodzaje, zalety, wady benchmarkingu, a także główne marnotrawstwa pojawiające się w przedsiębiorstwie. Druga część empiryczna przedstawia benchmarking, przykład firmy Xerox, ale także cztery przykłady przedsiębiorstw na rynku polskim z różnych branż (logistyka miejska, przedsiębiorstwo produkcyjne, przedsiębiorstwo dystrybucyjne i firma z rynku TSL), które wdrożyły rozwiązania doskonalące procesy logistyczne.

**Słowa kluczowe:** benchmarking, lean management, przedsiębiorstwo, straty.

