

ENVIRONMENTAL BENCHMARKING FOR LOCAL AUTHORITIES

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Abstract:

This paper is an attempt to clarify and present the many definitions of benchmarking. It also attempts to explain the basic steps of benchmarking, to show how this tool can be applied by local authorities as well as to discuss its potential benefits and limitations. It is our strong belief that if cities use indicators and progressively introduce targets to improve management and related urban life quality, and to measure progress towards more sustainable development, we will also create a new type of competition among cities and foster innovation. This is seen to be important because local authorities' actions play a vital role in responding to the challenges of enhancing the state of the environment not only in policy-making, but also in the provision of services and in the planning process. Local communities therefore need to be aware of their own sustainability performance levels and should be able to engage in exchange of best practices to respond effectively to the eco-economical challenges of the century.

Key words: innovation, performance, benchmarking, local authorities and sustainable development

Introduction

In the current economic crisis, Europe needs a high level of competitiveness to ensure its standards of living. However, competitiveness is not a purpose in itself. Its target is to improve the living standards of people. Humanity is the result of evolution over the residues that have accumulated long-term - tangible and intangible - of all models of existence, and which, taken together, form a barrier in front of the progress searched by current generations. Its defeat is unthinkable without rapid progress, deep knowledge and promoting, especially in the economy. Multiplying the population has exceeded the level of sustainability of natural ecosystem. Humans have evolved even after having reached the necessary knowledge, as if they were not aware that they live in a closed circle, exceeding the capacity of planet's self-regenerating and now we

are witnessing an enormous waste of resources specific to the consumer society.

Reflecting the new economy in terms of environmental management requires the use of new instruments as micro-economic and macro-economic, such as the Environmental Management System (EMS) and environmental costs Managerial Accounting (EMA-Environmental Management Accounting). The scope of Environmental Managerial Accounting is multiple, but this study is based primarily on the analysis of environmental benchmarking process, which aims for long-term objective to create sustainable prosperity. Benchmarking is poorly understood if seen only as a tool to reduce costs on short term. Such an interpretation would discredit benchmarking in designing a company based on innovation and economic development. Environmental

benchmarking must exceed ideological approaches and contribute to finding rational solutions in order to adopt the best practices in the world.

Therefore the whole study is based on highlighting the importance of environmental benchmarking's eco-efficiency conditions. When we say eco-efficiency we refer mainly to increased environmental quality and satisfaction of citizens at the lowest costs.

Benchmarking theoretical concepts

Benchmarking although perceived mainly as a theoretical concept, must be regarded as more than a tool for comparison of indicators or performance criteria. How benchmarking was developed in enterprises to improve performance and productivity, both required by the globalization of competition, this methodology is applicable and more accessible mainly at enterprise level where opportunities for improvement can be easily identified and implemented. In the private sector there are no limits in addressing this methodology, which can be used for inputs, outputs, methods, processes and short and long term goals. Available types of benchmarking can be applied both internally, and here we refer to the comparison of units of the same entity and externally, comparing entities with similar features and products, operations and strategies, setting targets and achieving objectives.

If we refer only to the required general conditions we can say, however, that there is no universally applicable methodology. Although it is difficult to compare activities and production efficiency in public services, or political area than in the private sector it is not impossible, this assertion being the premise of this article. Why do we say this, because simply copying a factor or a policy can lead to achieving the desired performance. What should be considered in implementing

benchmarking is the identification of steps to take for each of the items. Therefore, a project-oriented framework for benchmarking have inputs and outputs of certain processes for their development. But we must aim at the same time the efficiency of policies in the field. The current structural inflexibility in the act of governance, public services and institutions will slow improvement of framework conditions in key areas set by benchmarking. In addition, there is a lack of political power at EU level, and often to Member States for the immediate implementation of changes aimed as best practice.

Definitions

There is considerable confusion in what the comparison process actually means. Often the process of benchmarking is understood as simply a process of comparing the numbers of different performance levels in various organizations. However, if benchmarking is seen as a tool for improvement, it is more than just a comparison and a classification. This goes further than the benchmarks, standards and rules, and investigates the practices that support benchmarks. The philosophy of benchmarking is well expressed by the following statement: "Benchmarking is the practice of being humble enough to admit that someone is better than you, and be wise enough to learn how to adapt their practice to the best standards (APQC (American Productivity and Quality Center),- <http://www.apqc.org/best/whatis.cfm>). Benchmarking is an observation regarding the existence of differences in performance and learning about best practices from others. Benchmarking concept was introduced by Xerox Corporation to cope with market competition from Japanese by 70's.

A broader and more conventional definition of this process would be as follows: "Benchmarking is the process of comparing their performance with

other organizations, identifying the organizations with the highest level of performance and trying to adapt their organization techniques for high performance”(Oleg Serebrian, 2006). It should also be noted that there is often confusion between a reference point and actual process of benchmarking. A benchmark is simply a standard of performance. Standards may be established by the organization as a target or expected level of performance or for various other reasons. Benchmarking can also be established by looking outside the organization. However, reference values should not necessarily involve benchmarking process, as reference values can be used by other management tools such as quality management or environmental management. An important element of the definition of benchmarking is the best practice. Best practices, more traditional uses of benchmarking, defined by Robert Camp as follows: "those practices that best serve the many needs of the client". Thus, it is argued that the objectives of a benchmarking study should be based on the client needs, whether customers are internal (departments within the organization) or external (consumers, citizens, regulators, local and national legislators, environmental groups, investors). Making a benchmarking study is insignificant if it is not designed to respond to specific customer requirements.

It should be noted that, especially as regards environmental issues, costs and benefits can not always be expressed in quantitative terms. If there are improvements in air quality due to a comparative analysis would not be possible (or necessary) to express all benefits in financial terms. Also, benefits such as networking and partnerships are difficult to quantify. These qualitative aspects must be considered when talking about environmental benchmarking.

Why is Environmental Benchmarking different from Regular Benchmarking? Mainly, the idea and methodology of environmental benchmarking is not different from any other process of benchmarking. In fact, the term "Environmental Benchmarking" which is used for all cases could be questioned. To avoid confusion, it might be more appropriate the use of phrases such as "Environmental Benchmarking for improved performance," "Benchmarking for continuous environmental improvement", "Benchmarking to improve waste management costs" or "Strategic Environmental Benchmarking" depending on the scope of the benchmarking process.

As with the general benchmarking there are different notions about what environmental benchmarking actually means. Often, the term "environment" refers simply to share, compare and rank the environmental performance of different organizations. For example, the efforts of third parties, such as environmental NGOs comparison of air emissions or waste. However, if environmental benchmarking is understood as a tool for improvement, it should go further. This should involve analysis of practices leading to superior environmental performance.

The first definition of benchmarking occurred in 1998 and described the economic mechanism as a process of measuring and comparing the performance of a comparable business processes of the main organizations for information that helps organization to identify and implement performance practices. Summing up in an idea we could say that environmental Benchmarking seeks about, to learn best practices for achieving performance in environmental management in terms of eco-efficiency, and trying to adapt these practices to their organizations or regarding this paper to their own municipalities.

Different types of benchmarking

Benchmarking can have both objective and different application areas, there is no single way to approach this process. Different types of benchmarking can be distinguished and classified in accordance with what is compared and who are the compared

one's. Thus there are different types of benchmarking and to make a correct classification, it is imperative to put us two questions: What is compared? and Who is compared?, so we can distinguish the following types of benchmarking in figure 1 and figure 2:

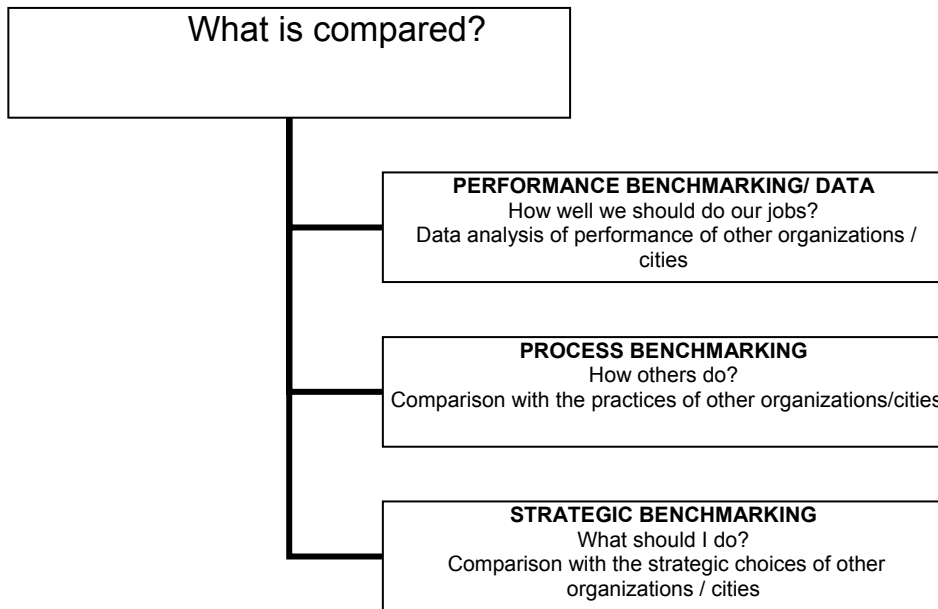


Figure 1. Benchmarking types(1)
Source: original

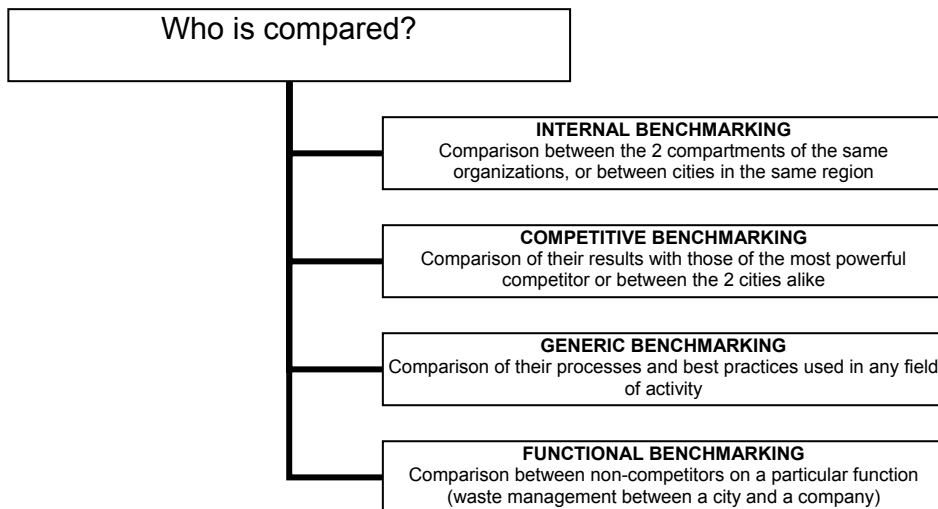


Figure 2. Benchmarking types(2)
Source: original conception of authors

What could raise questions would be: Why would be necessarily such a classification? The reasons are multiple, but what is really important is that identifying the correct research methods, we will correctly identify strategies to improve performance. Properly implementing such types of environmental benchmarking, increase accountability for environmental and related costs. Local authorities will improve environmental quality of services offered, but with minimum costs, so the public sector must adapt to the practices used in the private sector under the concept "New Public Management", aimed at an orientation towards results and efficiency, in terms of a limited budget. It also must increase transparency to the public and

the central authorities in the use of money. Increasingly more than can be seen that most people want a healthy environment. Precisely for this reason, they must learn how to identify and improve less good activities, where are they situated to the other municipalities, as well as achieving goals, at what level to set targets. A clean environment could be used as an argument for marketing to attract tourists and investors. The main idea of benchmarking is to learn from the experience of those who have attained a high level of performance.

Types of environmental benchmarking that would best match the local authorities of cities are seen in table 1:

Table 1
Types of environmental benchmarking appropriate for local authorities

	PERFORMANCE B.	PROCESS B.	STRATEGIC B.
INTERNAL BENCHMARKING			
Internal B.	Comparison of indicators with targets	B.'s certain functions of the municipality	Not very useful
EXTERNAL BENCHMARKING			
Competitive B.(with other local authorities)	Comparison of indicators	B. of specific processes	Comparing different strategies
Functional B.(with other organizations)	Comparison of indicators	B. of specific processes	Not very useful
BENCHMARKING MADE BY A THIRD PARTY			
Competitors evaluation	Comparison between regions based on indicators	Comparison and rewarding practices	-

Source: Ioan Popescu, Viorel Scurtu. Corneliu Russu, "Benchmarking, teorii și aplicații", Editura Economică, 2006, cap 1

The Benchmarking process

Benchmarking is a process that includes a series of actions, steps, functions or activities without a purpose or result and importing and identifying best practices to improve performance. The main objective of benchmarking is to learn how to operate in a much more appropriate than is done today.

There are dozens of sources that describe the process of benchmarking. It is called by some people "the nine steps in the process of benchmarking", or by other persons "four steps of benchmarking". The following description in fig.3 according to Andersen and Pettersen, economists who proposed the benchmarking

process as “the wheel of process(Andersen, B. and Pettersen, P-G, 1996).
 benchmarking”, indicating that
 benchmarking is a continuous



Figure 3. The Wheel of benchmarking process

Source: Andersen, B. and Pettersen, P-G, “The benchmarking handbook. Step-by-step instructions”, Chapman&Hall, London 1996

The time required (and hence costs) for a study of benchmarking depends on the scope and depth of the study, but normally takes at least 8 months, and within 18 months. Effective implementation of the improvements may take much longer depending on how radical is the changing.

Advantages and disadvantages of environmental benchmarking

Benchmarking is a good tool to find the position you are and the areas

that need improvement. This parts of benchmarking should be more thoroughly investigated.

Like any other process, benchmarking also has advantages and disadvantages that can be identified according to each type of benchmarking in part. Thus both advantages and disadvantages of environmental benchmarking can be traced summarized in the table 2 and table 3:

Table 2

Environmental benchmarking advantages

	PERFORMANCE B.	PROCESS B.	STRATEGIC B.
Internal benchmarking	Data readily available Comparability Stimulate competition Basis for further analysis	Establishes best practices External B. experience Supports quality/environmental management	-
Competitive B.(with other local authorities)	Allows organizations to recognize where the places Supports the speed to improve performance	Focus on important processes Good basis for long-term partnerships	Knowledge of other approaches Allow an integrated approach
Functional B.(with other organizations)	-	New ideas	-

Source: Ioan Popescu, Viorel Scurtu. Corneliu Russu, "Benchmarking, teorii și aplicații", Editura Economică, 2006, cap 1

Table 3

Environmental benchmarking disadvantages

	PERFORMANCE B.	PROCESS B.	STRATEGIC B.
Internal benchmarking	Analysis of gaps does not necessarily lead to improvement Narrow vision	Internal Rivalry Narrow Maybe there is comparability	Different strategic concepts in the organization / municipality hard to find
Competitive B.(with other local authorities)	Analysis of gaps does not necessarily lead to improvement Lack of comparability	Finding partners Rivalry between organizations / municipalities (sharing data)	Possible resistance to implementing new strategic concepts
Functional B. (with other organizations)	Lack of comparability	Finding partners Not recommended without experience in B.	Not useful

Source: Ioan Popescu, Viorel Scurtu. Corneliu Russu, "Benchmarking, teorii și aplicații", Editura Economică, 2006, cap 1

Knowing the advantages and disadvantages of the benchmarking process it may occur indecision in choosing the appropriate process for each organization or municipality. There is some success in each type of benchmarking, so it's appropriate that internal benchmarking to be done before the external one. Performance measurement and comparison with targets may be a condition for quality and environmental management, but also for the benchmarking process. The process to be analyzed must be understood and therefore it is imperative a performance benchmarking. Mainly depends on the choice of targets to be reached, the expertise in benchmarking, human and financial resources available, the available data and other instruments that can be used as an alternative to benchmarking, such as analysis of performance indicators, management and other systemic processes.

The importance of benchmarking's practice by local authorities

What should be the objective of environmental benchmarking for a community? In general, we can say that the basic idea is to learn how other communities manage to be "eco-efficient", how they manage to achieve an optimal level in terms of environmental protection and satisfaction to the citizens lower use of financial resources.

The process of benchmarking with other communities often can open our eyes in terms of performance, such as for example the cost in terms of selective waste collection, wastewater treatment, or how clean is the air in cities alike . If the data are analyzed in time, this can show also the progress that could be made in some communities. Such benchmarking processes, or benchmarking of sustainability indicators between cities, can be a sign of improvement,

especially for benchmarking results. A growing number of cities trying to become eco improve the performance of their city, because this may attract more tourists and more people who like to live in a healthy city, and might be more popular for conferences or for new entrepreneurs. Performance benchmarking helps in this regard to promote good environmental practices.

Another point of view that shouldn't be overlooked by the authorities in banchmarking process is the methodology of implementation. Although in principle the process is done by comparison and analysis should not be skipped the factors that influence the choice of partners compared. First you must take into account the performance, geographic location, as is more appropriate to compare the two cities in the same region because they have the same geopolitical conditions, organizational structure and the default type of government and community size. The last factor is important because if the size of the two cities is not similar difficulty can arise in the implementation of processes as waste management, for example. Another factors may be the number of features or problems that need to be compared in both cases. Last but not the least important factor is the demographic data collection. Finding partners can be done by national or regional statistical analysis depends on how big is the area of research and analysis or from local or regional environmental reports. Other media may be conferences, seminars, articles, research reports, databases on best practices and not least the networks of local authorities.

The Nine Step Agencie within the Office of Public Services from United Kingdom have realized a benchmarking study in the public sector in order to improve value for money. (<http://www.globalbenchmarking.org/publications/articles>) This guest for improved value for money has led to the

development of a range of efficiency tools. Within this context, benchmarking is one of the several tools which are increasingly recognised as particularly valuable. The study was realized among local authorities, including police and fire services, in England and in Wales. The study began in 1992 and since then is a continuous process. Local authorities, are responsible for a wide range of essential services, such as education, housing, land use planning, social services and waste disposal. In addition, police (outside London) and fire services are funded and operated on a local basis. There is a total of 449 local authorities, consisting of 47 county councils, 333 district councils, 36 metropolitan borough councils and 33 London borough councils though work is on-going to rationalise the system. Together, they employ more than 1.5 million staff and are responsible for expenditure of over £44 billion.

The Local Government Act 1992 for the first time required the Audit Commission to produce annual comparative indicators of local authority

performance, including that of police and fire services. The resulting data is published annually. The first year following the legislation was taken up with consultation between the Audit Commission and the bodies whose performance was to be covered. The process was complex and required sensitive handling, since local authorities are accountable to their own elected bodies, rather than to either the Audit Commission or Ministers. The agreed approach was for performance indicators to be defined for each area of activity. Each indicator was designed with the bodies whose performance it would measure, to ensure that the activity measured was appropriate and that the resources required for collection of the data were not excessive. The detailed methods by which performance was to be measured were published in 1993. Given the very wide range of activities undertaken and the number of areas selected for comparison, over 200 performance indicators were set, as follows in the table below:

Table 4

Selection of local authority key performance indicators

Area of Activity	Indicator
Education	% of 3 and 4 years old with an LA school place
	Expenditure per primary school pupil
	Expenditure per secondary school pupil
	% of draft special educational needs statements prepared within 6 months
Social Services	% of elderly people over 75 helped to live at home
	% of minor items of equipment to help people to live at home provided within 3 weeks
	% of adults going into residential care who were offered single rooms
	% of children in LA who are in foster homes
	Number of children on the Child Protection Register per 1000 children
Libraries	Number of books and other items issued by libraries per head of population
Total Expenditure	Total expenditure per head of population
Council Housing	Average time taken to re-let council dwelling
	% of tenants owing more than 13 weeks' rent
Recycling	% of household waste recycled

Planning Applications	% of householders planning applications decided in 8 weeks
Council Tax Benefit	% of new council tax benefit claims processed in 14 days
Council Tax Collection	Council tax collected as a % of the total amount due
Inspected Food Premises	Number of inspections of food premises as a % of the total inspections which should have been carried out
Quality of Complaints Systems	Quality of complaints procedures
Police 999 Calls and Emergencies	Performance in answering 999 calls
	Performance in responding to emergencies
Crime and Detection	Number of recorded crimes per 1000 population
	% of all crimes cleared-up by primary means
	% of violent crimes cleared-up by primary means
	% of burglaries cleared-up by primary means
	Number of crimes cleared-up by primary means per police officer
Police Resources	Number of police officers available for ordinary duty per 1000 population
	Expenditure on policing officers' time spent in public
Fire Service	% of fire calls at which "attendance standards" were met
	Cost of the fire service per head of population

Source: Performance Benchmarking in the public sector: The United Kingdom Experience, Jeremy Cowper and Dr. Martin Samuels Next Steps Team, Office of Public Services Cabinet Office, United Kingdom

The Audit Commission has established a series of more than 200 key performance indicators as a means to measure the activities of local authorities. The number is high, due to the wide range of the authorities' business. The Commission recognises that a balance must be struck between gathering sufficient data to allow an accurate assessment of performance to be made, while ensuring that the need to collect the data does not become an excessive burden. Given that the system has been in operation only since 1993, it is accepted that the indicators employed need to be adapted over time, in order to capture more accurately the key aspects of

performance and also to minimise the resources required for their collection. The indicators listed below are only a small selection of the complete range, for which full details of local authority performance was published in April 1996.

As part of the Citizen's Charter, councils and police forces had to publish in local newspapers the details of their performance against the indicators. This information, as well as an explanation of the system used for its measurement, was also supplied to the Audit Commission at the end of the year. The Audit Commission then collated the data and produced a commentary on the key activities to

accompany its publication. The first set of data, covering the operational year 1993/94, was published in March 1995. The second set, covering 1994/95, was published in March 1996, thus starting the reporting of trends. The Audit Commission's approach to the data has largely been to let the figures speak for themselves, although it supplies a commentary seeking to bring out key issues. The aim of the programme is to inform the public debate about the performance of public services. In publishing the information, the Commission has not, in most cases, attempted to define what constitutes good or bad service. In some cases this will be obvious but, in others, views will justifiably differ about whether or not a given level of performance is good. In addition, the Audit Commission has been at pains to ensure that the data are interpreted in a way that takes local circumstances into account, such as rural or urban communities.

The trend data published in 1996 revealed that those councils with the worst performance in the previous year had improved significantly the five worst councils had improved performance by between 30 per cent and 60 per cent. However, a small number of councils still perform significantly below the rest. Councils performing at or close to the average do not seem to have achieved improvements in performance, yet comparison with similar councils, which are performing excellently for similar costs, suggests that there is scope to improve. Turning to police services, it was found that the performance of some services had deteriorated despite significant increases in funding, while others with much smaller increases in funding improved their performance significantly. Nevertheless, the Audit Commission noted that it can take time for increases in funding to show through in improvements in services.

For the future, the Commission aims to develop better measures of council and police performance. The

main thrust of its activity, however, will be to try to increase the impact of performance indicators at a local level. The Audit Commission has no power to require local authorities to use the results benchmarking data as the basis for work to improve performance. It can work only by persuasion. The Commission therefore intends to undertake a "roadshow" of seminars for councillors, police authority members and officers, meeting them in their own council and police force areas and highlighting how the indicators can help inform the process of performance review. The Commission has also piloted an initiative to communicate directly with the public about the performance of councils and police forces. In five main cities, it has installed a computerised version of the performance indicators in the main library and will assess the level of interest from the public before deciding whether to make this exhibition more widely available. The Citizen's Charter Unit has also produced a CD-ROM that brings together performance information for schools, hospitals, local authorities and emergency services. The programme uses a computer map to help people find the information on their local services. Copies are being made available free to schools, libraries and individuals.

As experience with these initiatives grows, the focus is shifting from specifying the use of particular efficiency tools towards allowing organisations to select the techniques most appropriate to their particular circumstances, though they may be challenged to justify their choices. This freedom, however, is within the context of moving towards measuring and publishing organisations' performance, as a means to identify good practice and encourage the pursuit of improvements (benchmarking). Through this approach, the UK seeks to achieve continuous improvement of public

services, while retaining public accountability for service provision.

At the heart of many of the public sector reform initiatives in the UK has been the philosophy that value for money can be best achieved by a separation of roles between those who set the policy and those who deliver it between the purchaser and the provider. This shift to a more contract-based system gives managers freedom to manage the operational delivery of services, within the policy and resources framework established by the political authorities. Greater clarity of roles and responsibilities has proved to be a key feature in facilitating improved performance.

Within this framework, however, managers must have incentives to use their freedoms to improve the efficiency and effectiveness of their organisations. In the private sector, this incentive is supplied by the competitive nature of the market low quality organisations will go out of business. The majority of public sector services, by contrast, do not operate in a competitive environment and therefore do not experience this pressure to improve.

A significant strand of the UK Government's drive to improve the performance of the public sector has been the creation of alternative means of replicating the pressure to improve which exists in the private sector. This has included requirements set by central government for local authorities to put certain activities out to competitive tender and for all public services to consider areas of work for transfer out to the private sector.

Impediments for environmental benchmarking

Benchmarking process is an intensive resource, especially if it's made with foreign partners. Assessment exercise will not be made if it is worth focusing on process improvement and learning from others.

In the process of internal benchmarking, there may be limitations to find benchmarking partners within the municipalities because many processes are made in the area of environmental protection. They often have separate departments dedicated to certain environmental problems. Waste management is organized by a single entity and how they make the collection may be the same across the city, with a single department responsible for coordination. Therefore, partners will be found externally. Moreover, internal benchmarking process is likely not to disclose progressive ideas. Different departments within a city may well learn from each other, but the probability of finding approaches that are completely different and give the results is much lower compared with External Benchmarking. Obstacles for internal benchmarking could come also from the members of the organization itself. It may be some reluctance to share experiences between different departments, especially where there is some competition for local budgets and incentives such as bonuses for good performance. As regards external benchmarking the problem of choosing a partner may be crucial. Problems of comparability and adaptability should also be taken into consideration when choosing a partner/partners. Information that can be used to search for partners is increasing, for example, number and best performance in practice, databases or the number of environmental reports of the authorities. However, compared with existing professional networks benchmarking at company level, exchange of information between authorities on the environment is only just beginning. Local authorities often do not have the resources to help the search for partners and benchmarking process must be based only on available information. Such benchmarking partners might not provide an excessive contribution to improving performance 100%.

Conclusions

As a first conclusion of all that was said above, we can say that benchmarking is not limited to carrying out comparisons between local institution and analyzed its competition, but rather aims to overcome competition and achieve excellence even in the same sector of activity . Benchmarking is directed towards identifying gaps and to develop new targets on implementation of proposed solutions, to identify opportunities and to improve the situation.

If applied properly benchmarking processes can lead to major improvements in the organization or the municipalities. However, there are several pitfalls that can undermine their efforts and make the process of benchmarking in an expensive one which does not result in the expected benefits

(<http://www.em.doe.gov/bch/survprt.html>).

Communities need to set clear their objectives, performance measures, appropriate information systems to monitor performance in significant areas. Benchmarking should be seen as one of the tools that improve the quality of life itself, which in the current economic crisis has become an imperative, a battle for survival for each man separately.

Efforts must be related to the strategic objectives of the organization or municipality. Before external benchmarking it should be made an analysis of their own processes. It should be pointed out the processes behind the figures. For benchmarking process, data collection shouldn't be limited. In the process must be involved stakeholders who understand and have the necessary authority to implement the proposed changes. The study shouldn't focus on areas too large and the targets and deadlines should be realistic. Benchmarking partners must be chosen carefully because it must be follow a protocol on exchange of data and information between them.

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