

# Benchmarking – A Tool for Better Business Management



## Introduction – The need for benchmarking

The European Union's public transport sector is undergoing a radical change forced by the lack of public funding and a general trend towards deregulation and privatisation. In addition, public transport companies have to compete with other publicly financed services (e.g. social welfare, education, healthcare) for scarce financial resources at the national and even regional level. In general, public transport companies are under pressure to cut costs, improve quality and increase revenues.

The managements of public transport companies as well as public transport authorities have two options. They can either justify receiving public money by spending on defined public transport services and achieving a certain level of quality; or they can show an increasing trend towards quality, productivity and patronage in order to improve the overall economics of the public transport system.

In order to restructure a public transport company or to implement a strategy, goals for the various organizational or business units have to be defined and controlled. In all cases benchmarking is a tool which supports this process as it delivers high transparency on cost and performance in a short

period of time; highlights strengths and deficits in all areas of observation; creates a sound basis in numerous fields for improvement of strategic alignment as well as improvements in cost, revenue and quality management; and provides targets for all levels of the hierarchy. Moreover, benchmarking can provide quantitative statements, "hard facts" and target-orientated performance indicators that can be used for many purposes.

## Theory – What is benchmarking?

Benchmarking is a continuous, systematic process for evaluating organisational best practices. It can improve products, services and work processes. Benchmarking as a tool stems from the early 1980s when organisational specialists from Xerox were discussing the big performance gaps between Xerox and its competitors. These specialists found two major applications for the process. First, benchmarking can be used to understand competitors and any other organisation by isolating and analyzing common functions and comparing the company's own practices with them. Second, benchmarking can be used to compare the details of processes used in design, manufacture, marketing and services, as opposed to just the finished result.

The three major types of benchmarking are as follows:

## Internal Benchmarking

This type of benchmarking looks at internal business practices and compares them, thereby helping to identify the best practices within an organisation. Internal benchmarking assumes that work processes will differ due to geography, local organisational history, the nature of managers and employees in different locations, etc. The aim is to identify the most effective or efficient work processes in different parts of the organisation and to share them, so that these best practices become widely used throughout the organisation. This internal understanding becomes a baseline when examining other companies.

## Competitive benchmarking

This type of benchmarking examines the products, services and work processes of an organisation's direct competitors and compares them with the company's own. This helps the firm to position products, services and processes relative to other companies in the market. Sometimes practices observed elsewhere can easily be applied by an organisation, while occasionally companies that have already undertaken their own benchmarking are willing to exchange information with others. Companies sometimes join forces to benchmark in non-proprietary areas.

## Functional/generic benchmarking

The type of benchmarking learns about high-quality products, services or processes by identifying the best practices of an organisation with a reputation for excellence in the area being benchmarked. For instance, Xerox used L.L.Bean as an example of excellent warehousing and order-fulfilment. This type of benchmarking can contribute to a "paradigm shift" in which a company's approach to certain issues or problems is radically changed. When undertaking this type of bench-

marking a company needs to look outside its own industry for ideas and keep an open mind.

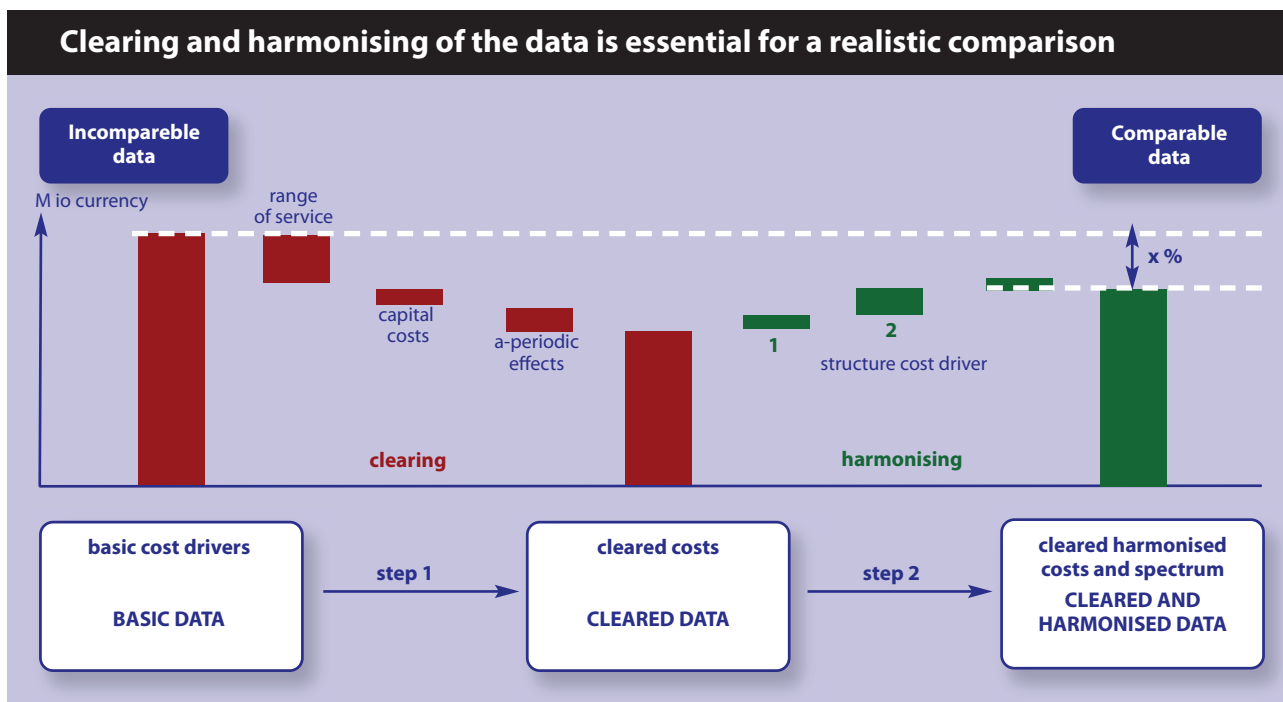
In principle it is possible to benchmark any function or characteristic that can be observed or measured. Typically, the main categories used in benchmarking are as follows:

- Products and services – Including finished goods and features that account for product differentiation.
- Work processes – Including design processes, R&D practices, workplace design, production processes, methods, distribution arrangements and manufacturing equipment.
- Support functions – Including the finance, human resources and marketing departments.
- Organisational performance – Including a look at specific performance indicators, such as yields, asset turnover and depreciation rates.
- Strategy – Including short- or long-term plans and the planning process.

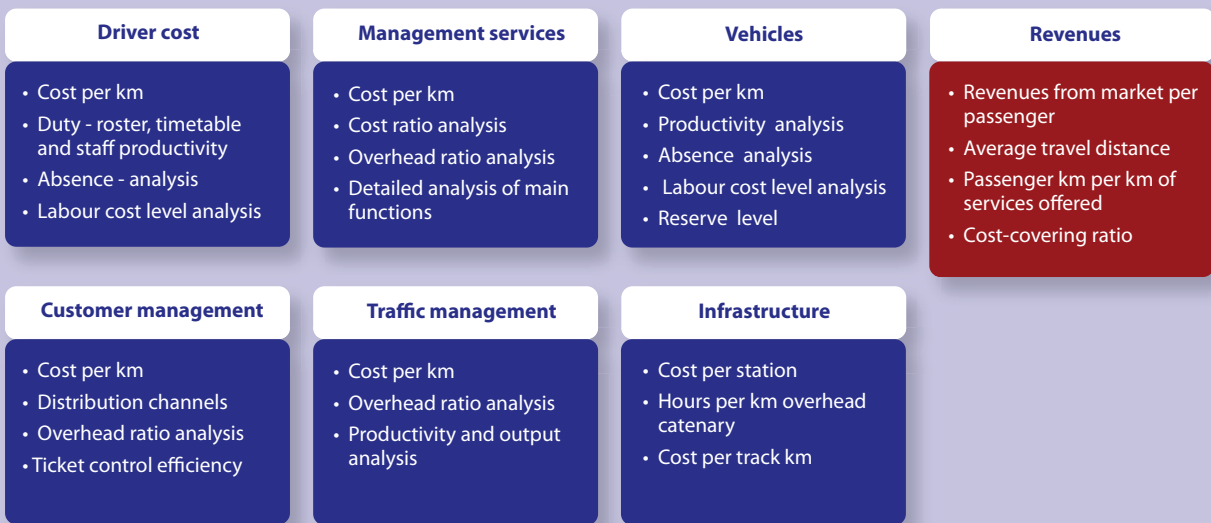
Benchmarking is a continuous process that provides information a company can use or adapt to improve virtually any corporate activity. The process takes considerable time, effort, discipline and labour. It is not a one-time, quick and easy activity that supplies simple answers. The idea of benchmarking is to learn, understand, assimilate and apply (not copy) what is learned in a pragmatic way that suits the company at hand.

## Methodology – How to use benchmarking properly

To benchmark successfully, a process model is needed that provides structure and a common language as a basic framework for action. The basic requirements for performing suc-

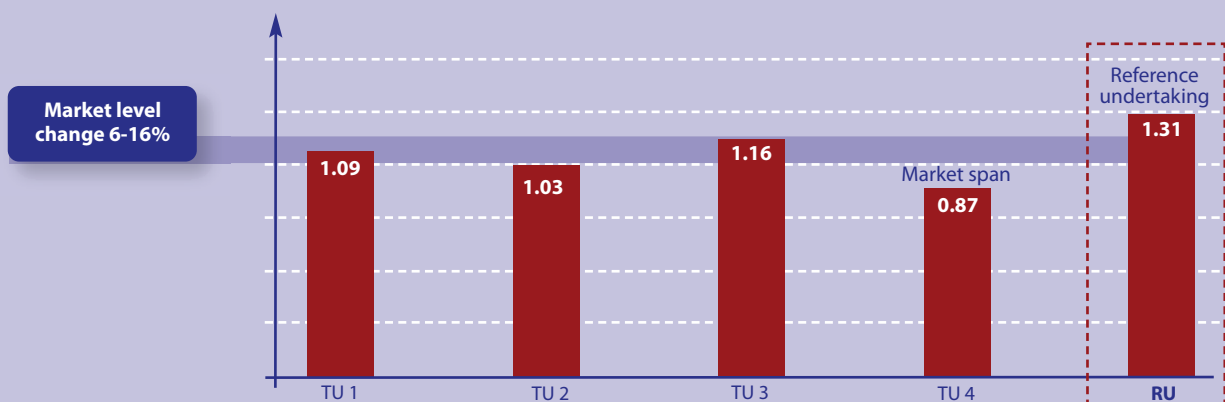


### Reference numbers and key performance indicators for all areas of the value chain



### At the given circulation speed target costs are around one euro per kilometre

Harmonised comparison of driver costs (Euro/NWkm)

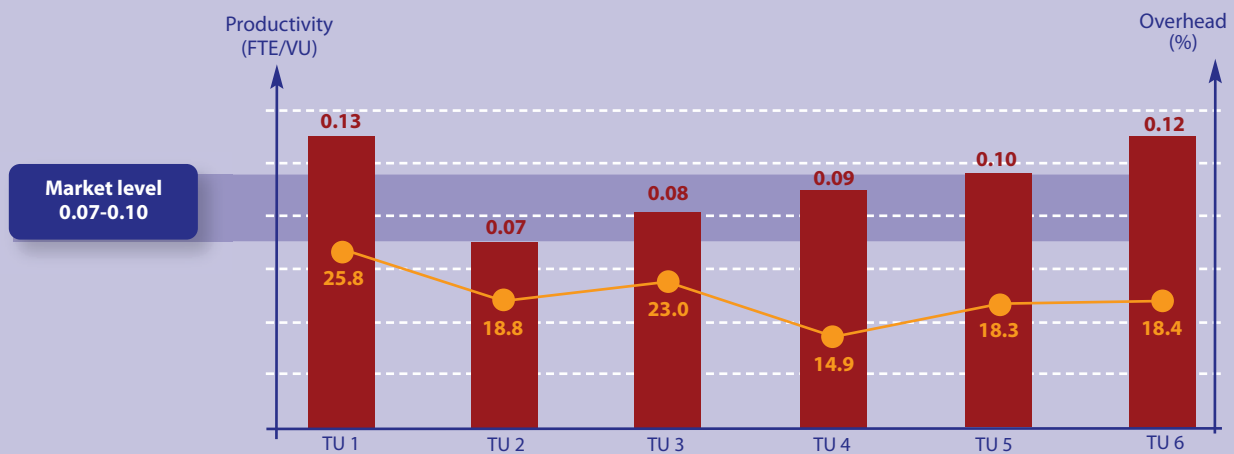


Values of impact

Ø disposable driver hours (h/a)	1,657	1,690	1,610	1,660	1,603
Ø Labour cost per net working time (euro/h)	62.60	57.50	64.30	52.40	69.60
Duty roster productivity	89%	91%	82%	94%	81%

## Example: Results and performance indicators for maintenance of buses

### Harmonised comparison of driver costs (Euro/NWkm)



### Factors of influence

Administration (no. of adm. staff)	4.2	3.8	6.5	3.4	8.6	8.2
Vehicle units (standardised)	185	164	246	169	288	269
Third Party volume	42%	20%	22%	33%	35%	19%

Successful benchmarking are as follows:

- Determining what to benchmark (exact descriptions and definitions).
- Identifying the benchmark partners and information sources.
- Collecting and analyzing the gathered information. (This demands an advanced methodology in order to avoid benchmark comparisons between “apples and pears.”)
- Taking action based on the benchmarking investigation.

Since the proper analysis of the gathered information is the most important step, more details are provided below.

The difficulty in benchmarking is to make data comparable without ignoring the specifics of each company (organisation) involved in the benchmarking process. Benchmarking results are only accepted by management, employees and trade unions when real comparability of data is guaranteed. This can be assured by taking two essential steps in the benchmarking process, based on strictly defined figures:

### 1. Clearing of data:

Data has to be checked to see whether the same content is expressed by the benchmarked figures. If, for example, the cost of driving hours is to be compared, the overall cost will have to include the same cost elements, such as personnel costs (including social costs and all fringe benefits). Also, the driving hours must be standardized: for example, net driving hours at the steering wheel without breaks and without ramping up and down times. Special items which only occurred in a specific year have to be eliminated in order to express the long-term cost level.

### 2. Harmonising of data:

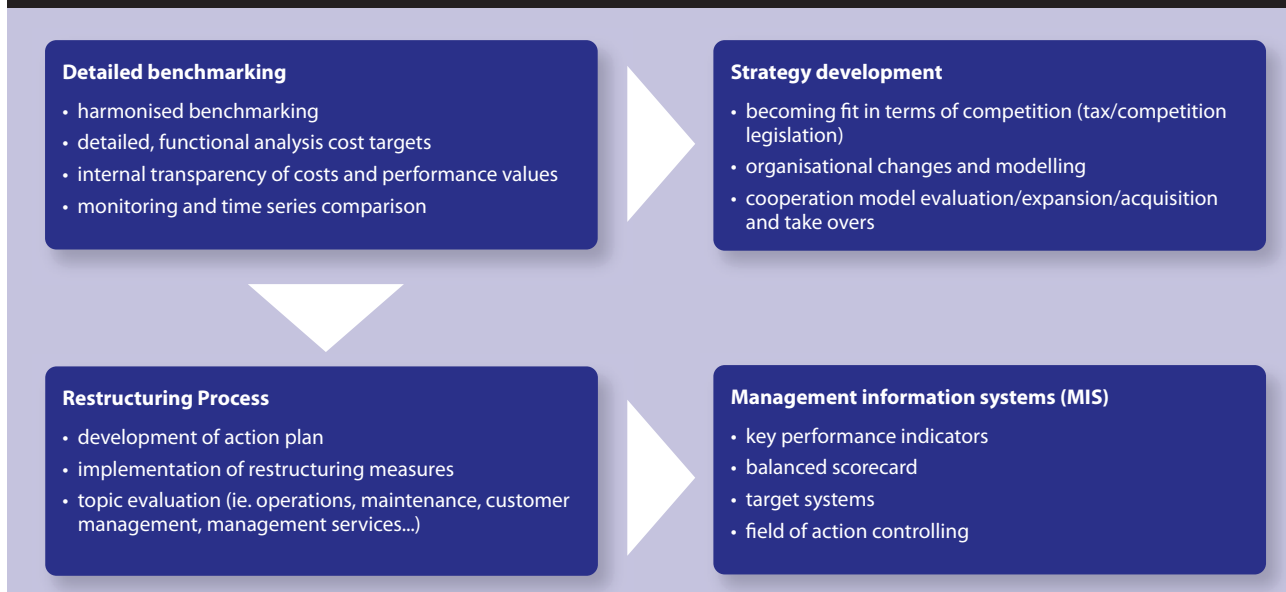
In order to compare “apples with apples,” data have to be harmonised according to the same cost driving factors for all of the benchmarked organizations involved. If, for example, the productivity of a workshop is to be benchmarked against the vehicle fleet for comparison purposes, the fleet of individual vehicles which includes standard and articulated buses with different numbers of doors and technical equipment (air conditioning, traffic control units, etc.) has to be converted into a fictive standardised fleet of vehicle units. Therefore a defined vehicle with its basic equipment is set as an index of 100 (e.g. standard high floor bus with two doors). Additional equipment, car length, etc. is incorporated with an individual surplus for each item (e.g. articulated bus: plus 40%; air conditioning: plus 12%; additional door: plus 3%), which describes the cost (and productivity driving) complexity of the vehicle fleets to be analysed. By summarising the index value of each vehicle a comparable denominator for the productivity value is created.

## Benchmarking results

The results of benchmarking have various aspects, depending on the intentions of the management of the organisations involved. For public transportation managers the most important elements tend to be the current costs, productivity and revenues of their firms. Hence benchmarks have to be carried out on the relevant key performance indicators if they are to describe the situation correctly. An overall picture is provided in the following table:

In the table above, the benchmark results for driver costs are

## Benchmarking as a starting point for further steps



shown for a sample of regional bus companies (TU = transport undertakings). The reference undertaking (RU) was compared against this sample.

Apparently the RU has some deficits in productivity (i.e. disposable driver hours per year), costs (labour cost per hour) and duty roster productivity, which accumulates to a disadvantage of around 30% in driver cost per km.

In terms of the value chain of a public transport company, vehicle costs are typically the second most important cost category. Within vehicle costs, maintenance and cleaning can be managed by the public transport operator and can often be optimized.

The productivity of a public transportation company — measured as full-time employees per (standardized) vehicle unit — deviates between 0.07 and 0.13, representing a delta of more than 80%. This is a clear indicator for need of improvement at companies TU 1 and TU 6, and also highlights the competitive disadvantage of the workshops of these two firms.

Besides highlighting differences in key performance indicators, which show disadvantages in certain areas and gaps versus the market level, the benchmarking process should also provide the first signs of areas that need improvement, by analysing and comparing the underlying processes of the various organisations.

In a large number of benchmarking projects, the initial benchmarking process has turned out to be the starting point for huge improvements in managing a public transport organisation. Based on the compilation of facts and figures in the benchmarking process, a company's current strengths and weaknesses become obvious. This allows the development of a restructuring process which outlines targets to be reached and improvement measures to be undertaken. Furthermore, the benchmarking results are useful in developing the firm's subsequent strategy, organisational changes and controlling tools (MIS). (See table below.)

Note: This document is based on both the cooperative desk research of Sputnik project partners and input from public transport practitioners/experts.