Benchmarking Procedure for Fleet Management

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Abstract

The goal of this research is to study and establish competitive benchmarking strategies for private fleet management in order to increase and optimize the quality and cost efficiency of the private fleet. First, the available concepts of benchmarking are reviewed through a literature study. This is followed by the development of a benchmarking procedure with specific applications for private fleet management. Our research shows that the benchmarking allows the private fleet manager to identify the fleet’s poor performance attributes, and it promotes positive and continual change for the fleet based upon the identification of the fleet’s weaknesses.

Introduction

Operating a private fleet of trucks is an expensive and sometimes risky business decision. Many companies have eliminated their private fleet, and have moved to contracting out the required delivery services. Even though many companies can eliminate a costly private delivery fleet, not all companies have this easy option to eliminate the fleet and contract out for their customers’ required delivery needs. Some companies have customers with special product delivery needs that cannot be sufficiently met by a contract carrier. The majority of companies that operate a private fleet offer a specialized or unique service to their customer through the private fleet. Without the private fleet, most of these companies would lose a strategic competitive advantage and jeopardize their customer base. For such companies, it is compulsory to maintain a private fleet in order to meet the customer’s needs.

Today’s business environment is demanding. Operating a private fleet of trucks is an expensive and sometimes risky business decision. In a climate that has high expectations with no tolerance for average performance, private fleet managers are forced to attain exceedingly high levels of reliability and cost efficiency within their fleets. Unit reliability is defined as the probability that the unit will perform its intended function under normal conditions. In order to increase the fleet’s reliability as a whole system, the fleet manager utilizes spare units as backup components for the fleet thereby introducing redundancy into the fleet system. Maximized fleet reliability offers the safest operating environment for the fleet personnel and for the customer. Fleet cost efficiency is defined as the consumption of
resource dollars with low waste. If it is mandatory that a company maintain a private delivery fleet, then the fleet manager must learn to effectively control the fleet’s cost without undermining fleet reliability. The primary measurements of the fleet manager’s aptitude are fleet cost control and customer satisfaction through fleet reliability.

Benchmarking the private fleet allows the fleet manager to identify and compare cost and reliability issues with best-in-class competitors. Once the fleet’s management strategies and performance have been successfully benchmarked, the fleet manager will have identified the poor performance areas of the fleet. One of the most common outcomes of a private fleet benchmarking study is the fleet manager’s realization that the fleet’s costs and reliability are not balanced.

The primary objective of this research is to create a private fleet benchmarking process for optimum fleet evaluation. Benchmarking the fleet allows the manager to identify the areas of the fleet that require change, and it ensures the continuous improvement of the fleet. Not having a complete understanding of the private fleet’s cost components and lacking an adequate fleet replacement strategy is a significant issue in fleet management. Without a benchmark of the fleet’s costs, the fleet’s cost effectiveness, safety, customer service, and reliability will all be negatively affected. Continuous improvement of the private fleet cannot be attained. The benchmarking strategies discussed in this paper are unique in that they have not been previously applied to the private fleet.

Following the introduction, a literature review on the problem background and benchmarking procedures is presented first. Then, benchmarking procedure appropriate for private fleet management is developed. Finally conclusions and recommendations for further research in the area are given.

### Benchmarking Concepts and Applications

A review of the literature concerning private fleet management reveals a void in practical management processes. Most fleet managers recognize that strategic fleet decisions, such as formalized replacement intervals and cost comparisons, are a necessity, but they lack the standardized methods to achieve optimized fleet decisions. Some fleet management literature states that benchmarking is a widening method for creating strategic logistics management decisions, but the literature fails to create an actual process for the fleet manager to follow. Some articles discuss the importance of recording equipment costs and managing the fleet’s time in order to run a cost effective fleet, but the literature still does not propose a formal process that a fleet manager can follow in order to create a cost effective fleet. There are numerous sources that teach a fleet manager what efficiency and quality are as concepts, but the available literature does not teach the fleet manager how to actually attain quality and efficiency for the fleet.

It is typical that fleet management literature supports the use of quality and strategic concepts such as benchmarking and life cycle costing, but the current available literature fails to provide an actual fleet process that details how to benchmark and life cycle cost the fleet.
Until standardized methods are created for the fleet, fleet management practice will continue to be based upon heuristics and experience rather than fleet data and quality processes.

There are several generalized benchmarking processes available for use. There is not a benchmarking process available that has been modified to fit the specific requirements of the private fleet. Burke\(^4\) discusses a valid ten-step benchmarking method. Burke’s benchmarking process is a general guideline, and can be modified to fit the benchmarking needs of the private fleet. Burke’s ten steps are:

1. Determine the processes to be benchmarked. This step defines the process to be benchmarked, and this step is considered to be the cornerstone of benchmarking. Some critical questions that must be answered at this stage are “How much change is possible” and “Have departmental priorities been established”?

2. Determine the organizations to be benchmarked. It is important to benchmark against the best. An incorrect choice to benchmark against could lead to practice incompatibilities or an uncooperative benchmark.

3. Gather data. This step involves creating a plan for data collection. Incorrect implementation of this step could result in data that is useless or inadequate for the company’s uses. As already discussed, it is essential that the fleet manager have a process to store and track the fleet’s costs in order to efficiently make fleet decisions.

4. Analyze for gaps. The collected data must be analyzed in order to determine how far present performance lags behind what would be considered the ideal performance. A proper implementation of this step will result in a clear picture of the fleet’s current processes in comparison to that of others in the industry.

5. Determine future trends. This step examines the fleet’s past performance and projects future performance in relation to the competitors, both with and without the proposed benchmarking changes. This allows the fleet manager to examine all of the available options and to realistically examine the benefits of the proposed benchmarking changes.

6. Reveal results and sell the process. The benchmarking results and implications must be communicated to the significant audiences within the organization. The correct implementation of this step will convince the audience of the necessity for change and motivate them to carry out the benchmarking changes.

7. Achieve consensus on revised goals. This step involves revising the goals set in step 5 in order to close the performance gap and achieving consensus on those goals. This step allows for the creation of new standards.

8. Establish action plans. This step establishes the step-by-step plan designed to bring about the goals created and approved in step 7.

9. Implement plans and monitor results. This step executes the approved processes and monitors the day-to-day changes after implementation. The proper implementation of this step means that deviations from the plan will be recognized and corrected.

10. Recalibrate benchmarks. This step consists of the fleet manager continuously evaluating the benchmarked practices and reinstituting the benchmarking process when necessary. Implementation of this step prevents complacency.

Summers\(^5\) describes a six-step benchmarking process. The benchmarking steps proposed are:
1. Determine the focus of the benchmarking study.
2. Understand your organization in order to understand the process to be benchmarked.
3. Determine what to measure and determine the measures of performance.
4. Determine whom to benchmark against.
5. Benchmark.

Both of these benchmarking processes are generalized, and they require modification in order to fulfill the benchmarking needs of a specific organization or industry. Benchmarking is a popular management maxim that can actually aid the private fleet\(^6\), but the fleet manager requires a specified process for the fleet.

The Treasury Board of Canada Secretariat also offers a twelve-step generic benchmarking guide\(^7\). The Treasury discusses how formal benchmarking features are integral to how federal departments, agencies, and Crown corporations operate.

In seeking benchmarking information, Besterfield et. al.\(^8\) indicate that the benchmarkers can use internal sources, data in the public domain, original research, or a combination of sources. Benchmarking has been successfully applied in many industries and locations. It is imperative that fleet managers are given a benchmarking process that fits the specific needs of the private fleet. The fleet manager must enjoy the benefits of benchmarking as other industries have.

**Benchmarking Procedure for Private Fleet**

It has been written that benchmarking is the practice of being humble enough to admit that someone else is better at something and wise enough to try and learn how to match and even surpass them at it\(^7\). Formal benchmarking can be defined as an improvement process in which a company measures its performance against that of best-in-class companies, determines how those companies achieved their performance levels, and uses the information to improve its own performance. Benchmarking measurements and information allow the fleet manager to draw conclusions about the fleet’s performance and fleet attributes requiring change. Benchmarking is not a management tool that can be ignored, and a prudent private fleet manager will practice benchmarking. If a fleet does not properly benchmark, they can easily lose their competitive edge.

The fleet manager obtains many benefits from benchmarking. The primary benefit of benchmarking the private fleet is the knowledge gained as to where the fleet is in relation to customer and company requirements. Benchmarking allows the fleet manager to identify areas within the fleet that have opportunity for improvement, and therefore continuously improve the fleet.
Since benchmarking is vital to the welfare of the fleet, how is benchmarking applied within a fleet? There are four basic types of benchmarking:

1. **Internal**: the process of comparing one particular operation within the organization with another. Internal benchmarking is considered to be the easiest benchmarking to complete.
2. **Competitive**: the process of comparing an operation with that of your direct competitor. Competitive benchmarking is considered to be the most difficult benchmarking to complete.
3. **Functional**: the process of comparing an operation with that of similar ones within a broad range of an industry.
4. **Generic**: the process of comparing operations from unrelated industries. Generic benchmarking usually allows easy access to information because there is no conflict with competition.

Private fleet operation can vary greatly by industry and is often industry specific. This means that functional and generic benchmarking will not provide the best and most useful benchmarking results for the fleet. The fleet’s operations are unique within its company meaning that an internal benchmarking study will not yield the most useful results either. A competitive benchmarking study is the most beneficial for the private fleet. The competitive benchmarking study allows the fleet manager to compare the fleet to others in the specific industry, yielding the most effective results for the fleet. Competitive benchmarking displays the fleet’s performance and weaknesses best by comparing the fleet specifically to the fleet’s competitors over the same customer base.

A fleet manager must go beyond just learning and understanding benchmarking. A working, systemic process must be designed and put in place within the fleet. How does a fleet design a working benchmark process? A modified version of the current competitive benchmarking processes is developed in this research that is specifically created for private fleet management.

Before the actual benchmarking process begins, the fleet manager must complete two processes in order for the fleet’s benchmarking study to be successful. Process 1 is to categorize the fleet’s costs. In order to complete the benchmarking study, the fleet manager must have a thorough understanding of the fleet’s costs. The first step to understanding what the fleet’s actual costs are is to set standardized categories for each expense to fall into. Common costs are driver’s salary, benefits, training, travel, fleet maintenance, depreciation, and other administrative costs.

Process 2 is to determine the fleet’s costs. After the standardized cost categories have been created for the fleet, the fleet manager must have a means to determine what the fleet’s expenses are within the cost categories. Ideally, the fleet manager will operate a database that contains the fleet’s costs. The costs should be simple to obtain, analyze, and manipulate in order to achieve a thorough understanding of the fleet’s expenses by cost category.
After process 1 and 2 have been completed, the actual benchmarking process, Process 3, may begin. The fleet competitive benchmarking process consists of the eleven steps discussed below.

1. Identify the fleet benchmarking focus. Many aspects of the fleet can be benchmarked against the competition. Refer to Table 1 for a complete list of fleet aspects that are candidates for competitive benchmarking.

<table>
<thead>
<tr>
<th>Fleet Aspects for Competitive Benchmarking</th>
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<td>drivers' salary</td>
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<td>administrative costs</td>
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<td>driver training costs</td>
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<td>replacement strategy</td>
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<td>annual operating cost per unit</td>
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Table 1. Fleet Aspects for Competitive Benchmarking

2. Identify best-in-class competitors. Consider which competitors to benchmark against. Choose a high quality competitor within the same industry as the fleet. For example, benchmark a treating truck fleet against a competitor’s treating fleet only. In the fleet industry, this data may be difficult to obtain. Be diligent to ensure that the information obtained on the competitor is accurate. Refer to Table 2 for a list of many of the types of fleets that are eligible for competitive benchmarking.

<table>
<thead>
<tr>
<th>Types of Fleets for Competitive Benchmarking</th>
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<tr>
<td>oilfield treating fleets</td>
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<td>package delivery fleets - full truckloads</td>
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<td>package delivery fleets - less than truckloads</td>
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<td>bulk delivery fleets - single compartment trailers</td>
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<td>bulk delivery fleets - multiple compartment trailers</td>
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<td>hotshot delivery fleets</td>
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<tr>
<td>flatbed fleets for large container hauling</td>
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Table 2. Fleet Types for Competitive Benchmarking

3. Gather fleet data. As already previously noted, it is essential for the fleet manager to have a process to track and store data. In order to benchmark, accurate and timely data...
regarding the fleet’s maintenance costs, salary, and more are required. Refer to Table 3 for a list of the fleet data that is required in order to complete a competitive benchmarking study.

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<tr>
<th>Fleet Data Required for Competitive Benchmarking</th>
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<td>driver's salary</td>
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<td>administrative</td>
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<td>miscellaneous</td>
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Table 3. Fleet Data Required for Competitive Benchmarking

4. Analyze fleet data and determine performance gaps. This stage of benchmarking can be considered in three sub-steps.
   - Consider how far the fleet lags behind the competitor’s fleet regarding maintenance, replacement cycle, and any other fleet aspect that is to be benchmarked. The fleet manager must understand their fleet’s performance in relation to the competitor.
   - Examine the fleet’s past performance and consider the fleet’s future performance in relation to the benchmarked competitor. For example, if the fleet is aged in comparison to the competitor’s fleet, consider how continuing to operate the aged fleet will impact the future performance of the fleet. This step will allow the fleet manager to view the benefits of any benchmarked changes.
   - Consider cost savings and positive organizational images that may be obtained through benchmarking changes.

5. Create fleet goals. The fleet manager should establish goals for how costly the fleet should be and how reliable the fleet should be. For example, the fleet manager may establish the goal of reducing the fleet’s downtime due to maintenance issues by twenty percent or the fleet manager may set a goal of operating a fleet of trucks not older than seven years.

6. Create action plans in order to achieve the fleet’s goals. If the fleet manager’s goal is to reduce downtime due to maintenance issues, then the manager must create a detailed preventative maintenance plan in order to achieve this goal. For example, the fleet manager may institute a preventative maintenance plan that includes replacing the truck’s belts every fifty thousand miles or changing the engine’s coolant every forty thousand miles. If the fleet manager’s goal is to reduce the age of the fleet, then the manager must create an action plan and schedule to replace the aged units. For example, the manager
may desire to replace the aged units over a three-year period. A plan must be created to replace a specific number of trucks per year based upon budget constraints and need.

7. Communicate benchmarking results and action plans within the organization. It is essential that the benchmarking results be shared with fleet decision makers within the company in order motivate change for the fleet.

8. Create consensus on the action plans. These action plans may need to be revised and agreed upon by all of the fleet’s decision-makers.

9. Implement the action plans and monitor the action plan and its results. This step is to ensure that the plan has been implemented properly and that the desired results are achieved. As an example, if a new preventative maintenance plan has been implemented, the fleet manager monitor the plan to verify that downtime is decreased due to maintenance issues.

10. Evaluate the benchmarks periodically. Occasionally, it will become necessary to benchmark the fleet again. This step makes the fleet’s benchmarking process a continuous improvement process. Dependent upon the fleet’s particular industry, outside forces may force the benchmarking process and goals to be reconsidered. For example, a fleet that operates in the oil and gas industry may be prematurely forced to realign the fleet’s goals during an industry wide slowdown.

The private fleet manager would be prudent to follow the above fleet competitive benchmarking process. The step-by-step process is straightforward, and it allows for easy fleet performance gap identification, gap resolution, and continuous fleet and resolution monitoring. This eleven-step benchmarking process is the primary and most effective means to understanding where any private fleet is in relation to their competitors and to their customer expectations.

**Conclusions**

The fleet must be of sufficient quality to provide reliable service to the customer while generating revenue and cost savings for the organization. The fleet manager must posses a suitable means to evaluate the fleet’s most important quality attributes. This paper proposes that the fleet manager complete the competitive benchmarking process in order to maintain the highest quality and most cost effective private fleet.

Benchmarking allows the fleet manager to identify the quality attributes of the fleet that require change. Identifying the fleet’s poor performance and non-competitive areas enables the fleet manager to act accordingly in order to effect positive change upon the fleet. Without this benchmarking identification process, the fleet manager will not be aware of which fleet attributes require immediate change in order to create the highest quality fleet. Benchmarking also promotes continuous improvement for the fleet. It is a time consuming processes for the fleet manager, but they are absolutely essential practices.
References


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