

Taxi Standards Project Report

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Executive Summary

This report is about how some taxi companies in BC collect, use and manage data as part of their taxi operation. It also discusses performance standards and reporting.

The report sets out *actions* the Board is undertaking to encourage best practices. It also includes specific *recommendations* for taxi companies and taxi associations.

The report is an outcome of the Taxi Standards Project that was initiated by the Passenger Transportation Board. The Board launched the project to encourage taxi companies to:

1. provide relevant and reliable data about their operations when they are applying for more taxis; and
2. use performance targets so they can assess and improve performance over time.

Members of the Board's Taxi Standards Project committee met with General Managers and Directors of six taxi companies in five cities that have a population of 60,000 or more. They also met with representatives of two international dispatch system companies with products used by taxi companies. Although project work focussed on large and medium-sized companies, the Board considers most of the issues as applicable to companies and communities of all sizes.

This report starts with an overview of taxi data collection in BC. However, the report is focussed on the two objectives outlined above. It sets out information on a number of challenges that taxi companies face. For most of these challenges, the Board has committed to 4 follow-up actions that are described in the report. As well, it makes 6 recommendations of things taxi companies can do that should benefit their businesses. A consolidated list of Board actions and recommendations is provided in the Appendix.

As background, the report notes the following issues:

1. *Systems and technologies used in BC* – Many companies use computerized dispatch systems to manage their taxi operations. Collection and reporting of longer-term data are often a secondary purpose for using these systems.

Few taxi companies keep multi-year data that can show changes in their businesses over longer periods of time.

2. *Reasons for collecting taxi data* – Drivers, dispatchers, General Managers and company owners have their own set of reasons for using dispatch systems and the data they generate. Their main reasons do not include the preparation of a future application for additional vehicles.
3. *Different fleet sizes in the same markets* - The fleets of taxi companies in cities across BC vary in size. Larger companies may have resources that smaller companies do not. This report communicates some ‘best case’ scenarios and proposes collaboration within the industry that should benefit both large and small companies.
4. *Statistical data and passenger perspectives* - When a taxi company wants to expand its fleet and apply to the Board for more taxis, the Board expects that the taxi company will collect and present statistical data about its operation. By focussing this report on statistical data, the Board is not discounting the value of other types of evidence that companies may submit, such as comments from passengers.

The report addresses a number of issues that relate to the relevance and reliability of data that taxi companies submit in an application to the Board. It sets out actions the Board will take to help enhance information that taxi companies submit with their additional vehicles applications. The Board will:

- Publish a standard set of data-related definitions for use by taxi companies and the Board.
- Publish a core set of trip descriptions (or attributes) for use by taxi companies.
- Recommend that the Ministry revise its application form to specify that signing the form certifies the accuracy and validity of data submitted with an application.
- Invite taxi companies to make additional comments on the design and usefulness of the Board-created spreadsheets that taxi companies can use to summarize statistics submitted with an application for additional taxis.

- Strongly recommend that taxi companies take steps to ensure that they are storing multi-year data (at least two years). This is necessary for companies to review longer-term changes in their businesses, and for the Board to properly assess an application.
- Host a Fall 2014 meeting with technically-minded taxi industry representatives to discuss matters addressed in this report.

When taxi companies collect and use data, they are responsible for ensuring that:

- Summary reports make sense of raw data, and
- Statistics from new dispatch technologies are integrated with a company's computerized dispatch system so a complete set of data is available to the company and the Board.

The report also looks at ways that taxi companies set targets and may use statistics to assess performance. It also discusses the benefits of using longer-term performance targets for business and application purposes. The report notes:

- In addition to the shorter term operational targets, taxi companies should set a small number of longer-term key performance standards (targets) that they can monitor (e.g. passenger wait times).
- When applying to the Board for additional vehicles, applicants should identify the key performance targets it uses to guide company business decisions and determine when more taxis are needed.

The report also canvasses issues related to the reporting and publication of taxi company data outside the application process.

Taxi markets and dispatch technologies are evolving. Issues addressed in this report will only become more important.

Introduction

What is this report about?

The Board seeks to promote improvements in the data-usage practices of taxi companies in BC. These practices relate both to the use of data about taxi company operations and the use of data in setting standards and improving performance.

This report sets out *actions* the Board is undertaking to encourage best practices. It also includes specific *recommendations* for taxi companies and taxi associations.

What are ‘taxi standards’?

In this report, the term “taxi standards” includes statistical data and performance targets. Statistical data quantifies aspects of the taxi operation such as trip volumes, vehicle usage, and passenger wait times. Performance targets often quantify the level of operation that the taxi company considers satisfactory. A company may have customer-oriented targets such as picking up passengers within 10 minutes of a call to dispatch, 85% of the time. As well, a company may have a driver-oriented target such as an average of 2.5 trips per hour.

Why is the Board talking about ‘taxi standards’?

The Board is interested in taxi standards to encourage taxi companies to:

1. provide relevant and reliable data about their operations when applying for additional vehicles
2. set performance targets so they can monitor and assess changes in performance over time.

Computerized dispatch systems are used by most taxi fleets in BC. These systems provide fleet managers with operational data that helps them run their businesses. Each company has its own way of collecting and using data. They often use different systems that are configured to meet their individual needs. This creates challenges for the Board when it receives operational data from taxi companies seeking additional vehicles. In these instances, companies want to show the Board that there is a need for more taxis. However, the information provided may be insufficient, irrelevant or too detailed. Often, data is presented with no context. The Board initiated the Taxi Standards Project to address these issues.

This project should have benefits for taxi companies that go beyond the applications they submit to the Board. When taxi companies improve the data they collect for an application for additional taxis, they may also enhance their ability to assess and improve the performance of their businesses over time.

How did the Board get information about data and taxi operations?

Members of the Board's Taxi Standards Project committee met with General Managers and Directors of six taxi companies in five cities¹. We also met with representatives of two international dispatch system companies with products used by taxis in BC². Meetings were held between August 2013 and January 2014. We asked local governments to complete an online survey. In addition, we presented preliminary findings and recommendations in a discussion paper we posted online in February 2014. In response to the paper, the Board received additional comments from eight representatives of taxi associations, taxi companies and local governments. The Board refined some of the recommendations that were presented in the discussion paper. We thank all individuals who took the time to share their expertise and experiences.

Who is this report for?

The report is mainly for taxi company owners and General Managers. Taxi Standards Project work was focused on taxi companies in cities with a population of 60,000 or more. However, the report addresses issues and makes recommendations that are relevant to most taxi companies in BC regardless of company or community size. Many of the actions and recommendations in this report apply to all companies or will extend to smaller markets and operations over time. In addition, some issues in the report may be of interest to dispatch system companies and local governments with vehicles for hire bylaws.

¹ Richmond Taxi, Yellow Cab (Vancouver), AC Taxi (Nanaimo), Swiftsure Taxi (Nanaimo), PG Taxi (Prince George), Yellow Cab (Kamloops).

² Digital Dispatch Systems (DDS) and MT Data.

Taxi Data in Context

To understand statistical data that a taxi company produces, it helps to understand the context in which the data is collected and why. This section addresses these contextual issues:

1. Systems and Technologies Used in BC
2. Reasons for Collecting Taxi Data
3. Wide Range of Fleet Sizes in BC
4. Statistics, Letters and Demographic Information

1. Systems and Technologies Used in BC

Many taxi companies use computerized dispatch systems. Taxi companies in BC use systems manufactured by these companies: Digital Dispatch Systems (Richmond); Mobile Knowledge (Ottawa); MT Data (Melbourne and Houston); Piccolo (Richmond); and Tranware (Tucson and Toronto). Most companies use taxi meters produced by Centrodyne (Montreal) or Pulsar (New Jersey). Some use meters by Record (Calgary).

Dispatch systems are becoming more sophisticated. Increasingly, they are becoming integrated with other equipment and new communications and dispatch technologies. Most system enhancements are designed to meet the core business needs of taxis: *transporting passengers*.

For companies, data collection and reporting is often a secondary function of the dispatch system. At present, few taxi companies keep multi-year data that shows longer-term changes in the business. This is a big problem. When a taxi company decides to apply for additional taxis, companies with short-term data cannot show multi-year trends in customer service or business growth. This makes it more difficult to show that a public need exists for more taxis and why the need exists. But before the Board will approve an application, applicants must demonstrate that a public need exists for additional vehicles.

2. Reasons for Collecting Taxi Data

Taxi companies buy dispatch systems mainly so they have the tools they need for having vehicles available to pick up passengers. Vendors design systems that enable

taxi companies to do this efficiently and effectively. This is the core purpose of a dispatch system.

The companies we met with have used computerized dispatch systems for many years. These systems do more than dispatch taxis. For example, they often help companies manage recurring deadlines that include expiring vehicle inspections, chauffeurs’ permits, and drivers’ licences.

We found that some General Managers with sophisticated systems supplement the built-in reports with Excel spreadsheets to manage important aspects of their business. For example, one GM generates his own Excel spreadsheets to manage vehicle shifts. Another GM exports system data from the system to Excel in order to calculate passenger wait times for the fleet as a whole. This is necessary because the system only provides subtotals for each zone. Different users have different reasons for using the dispatch system. Table 1 identifies the main users and reasons for using the system.

Table 1: Dispatch System Uses

Activities	Users	Reasons
Operate Taxis	Drivers/Dispatchers	Transport Passengers.
Manage Fleet	General Managers	Schedule vehicles and drivers. Assess performance.
Expand Fleet	GMs and Companies	Quantify need for additional taxis.

3. Different Fleet Sizes in the Same Markets

Even in larger taxi markets in BC, the number of taxis in one company’s fleet can vary from 1 taxi to 50 or 100 or more than 200 taxis. To use and benefit from a more sophisticated system, companies require financial resources and a General Manager who knows how to use the system. A taxi association representative said that new data-collection requirements should not place an undue burden on smaller companies, and that smaller companies should have time to adapt to new requirements.

The Taxi Standards Project is a proactive initiative to learn from the industry about the statistical issues and challenges it faces. The Board wants to urge industry as a whole to enhance the way that it uses statistical data and performance targets. This is good for business, for passengers and for the Board which makes decisions on applications for additional taxis. For those with computer dispatch systems, the

Board is looking for better quality data and reporting. The Board encourages smaller companies in urban markets to look for opportunities to work with other companies or vendors to seek beneficial improvements in the systems they use now or purchase in the future.

4. Statistics, Letters and Demographic Information

When showing that a need exists for more taxis, applicants have the freedom to choose the type, quantity and quality of evidence that they provide to the Board. The evidence may be quantitative or qualitative. However, when a taxi company is established and wants to expand its fleet, the Board expects that it will have collected statistical data about its operation. Often, this type of data relates to trip volumes, vehicle usage, passenger wait times or other measures. This report focusses on such quantitative, statistical data.

The focus on statistical data does mean that other types of evidence cannot play an important role in an application. Examples include letters and demographic information. Such evidence may supplement taxi operational statistics mentioned earlier. The Board recognizes that letters from passengers can tell a story about local needs and circumstances that statistics cannot. The same is true of letters from businesses, such as hotels or restaurants, with customers who rely on taxi services. When we met with taxi companies, we also heard that drivers and General Managers have an intuitive knowledge of their local clientele and markets. Such insights, when detailed in a letter or report, could be helpful in an application. In rare and special circumstances, qualitative data alone may satisfy the Board that a need exists for additional taxis.

The next two sections of this report discuss specific Board findings, actions and recommendations. Each section relates directly to an objective of the Taxi Standards Project.

Objective 1: Relevant and Reliable Data for Applications

The Board did not find significant limitations in the capacity of taxi companies to collect data that is relevant to an application for additional taxis. However, we found variations in types of data and the level of statistical detail among dispatch systems. As well, we found some differences in ways that companies use the data

they have. As noted previously, short data storage periods are a problem. This section addresses dispatch system issues and steps for making improvements.

Define Data-Related Terms

Computerized dispatch systems ‘time-stamp’ pre-set milestone events that routinely occur during a taxi trip. They start when a passenger calls dispatch and end when the driver turns the meter off. More sophisticated systems time-stamp additional events such as arrival at the pick-up location. Systems with GPS also track location information.

When a dispatch system reports the wait times of passengers, it measures the time between two milestone events: the *dispatch request* and the *meter on* events. This example shows that potential exists to establish standard definitions for common terms like *wait times* based on milestone events that are tracked by a particular dispatch system. If a standard set of definitions could be produced and shared, understanding of the statistical data would be enhanced. There could also be a reduction in terminology confusion and time wasted in communications between taxi applicants and the Board.

Board Action A

Create a standard set of definitions for data-related terms (e.g. wait times) used by taxi companies and the Board when submitting and reviewing applications for additional taxis. *Before implementation, the Board will seek input from taxi industry representatives as well as dispatch companies.*

Tracking Trip Details

Dispatch systems record details about each trip. The type of details that a system records to describe a trip is commonly referred to as ‘attributes’. As an example, attributes can include the identity of the dispatch call taker, car number and method of payment. Taxi companies also have the ability to program ‘custom attributes’ into the dispatch system. This allows companies to track statistics for certain types of trips. For example, a company may set attributes to track requests for wheelchair accessible taxi trips or requests for a van. The choice of attributes affects the information a dispatch system records and reports. It also determines what statistical information will be accessible later when applying to the Board for additional vehicles.

Board Action B

Establish a core set of attributes (i.e. selected trip data details) that taxi companies may use to ensure that raw data collected by their dispatch systems is relevant to applications for additional taxis. *Before implementation, the Board will seek input from taxi industry representatives as well as dispatch companies.*

Validation of Data

The Board wants data that is relevant, complete and explained. It also wants data that is objective and accurate. At present, applicants often supply data to the Board without explaining how it was gathered. The Board must have confidence in the data and information it receives.

When we talked to taxi companies about data validation, they told us they want the Board to make its decisions based on accurate and valid data. If not, their businesses can be hurt. We also received a number of suggested ways that can help ensure the Board receives data that is valid and accurate:

- Dispatch vendors could submit data directly to the Board or they could certify data accuracy;
- General Managers and/or Owners and Directors could sign a declaration attesting to the accuracy and completeness of the data they provide.

The Discussion Paper stated that the Board intended to create a form for applicants to certify the accuracy and validity of data they provide. One comment on the discussion paper addressed this issue by suggesting that signed declarations should be notarized. As well, the Board considered already-established practices and steps that reflect its expectation that applicants submit data that is accurate and reliable. The Board decided that it will promote enhanced data accuracy and validity by advising the Ministry to revise its application form. A revised form would state explicitly that an owner or person with delegated authority who signs the form is certifying the accuracy and validity of data submitted with an application. This prevents the creation of an additional application form. The Board will also address data accuracy and certification in Board application materials. These new measures supplement long-standing options where the Board may ask applicants for additional data or information about data it has received.

Board Action C

With agreement of the Ministry of Transportation and Infrastructure, the Board will update existing application forms and application materials for additional taxis to add an explicit reference that signing the application attests to the accuracy of data provided.

Technical Meeting

As follow-up to the Board actions and recommendations in this report, the Board will host a half-day meeting of a limited number of technically-minded representatives of taxi companies in the province. The meeting will focus on Board actions A and B (standard data definitions and attributes) and recommendations 1 and 3 for taxi companies (2013 spreadsheets and integrated reports). The meeting will provide an opportunity to collaborate on common technical challenges and solutions for the potential benefit of all taxi companies. The Board will arrange a meeting in Fall 2014.

Board Action D

The Board will host a meeting in Fall 2014 and invite about a dozen technically-minded representatives of taxi companies in the province. The meeting will focus on Board Actions A and B, and on Taxi Industry Recommendations 1 and 3.

2013 Excel Spreadsheet Reports

In November 2013, the Board posted three Excel spreadsheets that taxi companies can use to summarize their operational taxi data:

- [Trip Volumes Spreadsheet](#)
- [Passenger Wait Times Spreadsheet](#)
- [Vehicles on Shift Spreadsheet](#)

The spreadsheets summarize the main types of data the Board receives with taxi applications. The new spreadsheets present data in a way that the Board can recognize and assess the changes in the taxi business. As well, they are flexible in design so taxi companies can adapt them to meet their unique circumstances and application purposes.

The spreadsheets are new. Taxi companies have not had a chance to use or test them. Some comments were received after the discussion paper was published. The Board will consider making changes to the spreadsheets after the spreadsheets are discussed at the Fall 2014 meeting.

Recommendation 1

Taxi companies provide comments to the Board on the new '2013 spreadsheets' to identify limitations and needed improvements. *The technical meeting (see Board Action D) will provide an opportunity for taxi industry representatives to review and discuss the spreadsheets. Anyone may send comments directly to the Board.*

Reporting Data to Support an Application

Before the Board is asked to approve more taxis, the taxi company itself must determine that more taxis are needed and the number it needs. We asked some operators when they would know they need more taxis. One General Manager said he could tell when the schedule he manages needs all taxis in the fleet to be on shift between 3:00 and 5:00 p.m. on weekdays. He described this as the core period of peak demand for taxis in his city.

Statistical data for a company's whole operation is useful. In addition, data that is targeted at a key time period or business segment can provide additional insight about whether and how many (or what types) of additional taxis may be needed. The 2013 Excel spreadsheet reports (referenced above) were designed so one spreadsheet could be used to report a 'big picture view' and then used again to focus on a specific aspect of the business (e.g. an important shift in the week).

Data Retention & Multiyear Reports

Most computerized dispatch systems archive data for short periods. It is common for systems to start overwriting data after 3 months, 6 months or 12 months. Few systems retain data for 3 years or longer.

Short data retention is a key obstacle for the production of reports with multi-year data. This is an important issue. Taxi companies can now extend the retention period for their data in one or both of these ways:

1. **Archive Raw Data** Companies can set up a manual schedule or automated system for saving (or exporting) raw data that is not overwritten by the dispatch system. Retaining archived data for long periods of time can require a high volume of electronic storage space. This can be costly.
2. **Archive Summary Reports** Instead of archiving raw data, companies can schedule or automate periodic summary reports that can be used later. Reports may be saved electronically or in printed format. One General Manager told us his company has reports that go back at least a dozen years.

Recommendation 2

Taxi companies should review their current data retention schedules to ensure that data is retained for two years or longer.

Managing Statistical Reports

As noted previously, dispatch systems collect raw data. To make sense of this data, it needs to be put into a report and stored. The types of reports are many and varied. The Board has developed Excel spreadsheets for reporting data. One General Manager noted that dispatch systems produce a detailed statistical summary report each month. The summary could be printed and saved each month. Sets of monthly statistical summaries could be stored electronically; that is, separately from the raw data. These statistics could then be retained and used for many years with little expansion of storage requirements. If dispatch companies did this, they could expand the potential to add new business reports that can show changes in the business over many years.

As dispatch systems become even more sophisticated, the types of reports discussed in this report could be replaced. For example, a General Manager suggested that vehicle-usage reports could be enhanced by measuring the times that vehicles book on and the times they book off. As another example, passenger-wait-time reports could show wait times as a percentile ranking (instead of percentages and averages) to identify trends that existing reports do not³.

To manage resources effectively, taxi associations and companies may work individually or collectively with dispatch system companies to integrate new reports into the dispatch system.

One General Manager uses third-party software to produce enhanced reports with data exported from his company's dispatch system. Therefore, taxi associations and companies could also work with third party software developers to extract data for company-designed reports that do not require a change to the dispatch system.

³ As a hypothetical illustration, a 'percentile wait times report' could be designed to show the wait times for short trips at the 15th percentile (e.g. 3 minutes), typical trips at the 50th percentile (e.g. 8 minutes) and longer trips at the 85th percentile (e.g. 12 minutes). Year-over-year comparisons of such data may identify shifts in business performance more quickly. It may also provide insight that may help companies explain why performance is shifting.

Recommendation 3

Taxi associations or groups of companies should consider working together and pooling resources to negotiate the development of integrated reporting solutions with dispatch companies or third party software developers.

Statistical tracking of new ‘trip request’ technologies

Taxi companies are starting to offer more ways to request a taxi. This includes smartphone apps and automated voice dispatch (referred to as interactive voice response, or IVR). When these technologies are adopted, it is important that statistics from these new trip request methods are itemized in reported trip statistics along with conventional methods like telephone dispatch and flagging from the street. New technologies may affect performance statistics for the company as a whole, possibly in unpredictable ways. An inclusive set of statistics will enable taxi companies and the Board to better understand changes in business trends.

Recommendation 4

When new dispatch technologies are adopted (e.g. smartphone apps), integrate statistics for the new dispatch methods with other dispatch statistics to provide a complete picture of operations. Taxi companies may ask dispatch system companies for reporting packages that are ‘smartphone-ready’ and ‘auto-dispatch-ready’.

Objective 2: Performance Standards

This section looks at common ways that taxi companies set targets and use statistics to monitor and assess performance. It also discusses the potential benefits of using longer-term performance targets for business and application purposes.

Short Term Performance Targets

The taxi companies we talked with used their dispatch system to assess performance throughout the day and week. We noticed that most companies had a way of knowing whether passengers were satisfied and a way of knowing whether drivers were satisfied. There are two main sources of information. For many companies in BC, dispatch systems are a key source of statistical data (e.g. wait times or cancelled trips; average trips per hour or revenue per shift). As well, managers periodically receive direct feedback from passengers and drivers.

Depending on what information is available, General Managers also had targets that guided decisions on scheduling and other business matters. Such targets were often intuitive and quantified. They were not necessarily written down.

As examples of driver-oriented targets, two General Managers wanted to see drivers averaging between 2.5 and 3 trips per hour. A General Manager of a company with smart meters referred to the average shift fare needed to meet minimum wage requirements.

With respect to passenger satisfaction, wait times and trip cancellations were the targets used most often. If the dispatch system reported wait times, this is the metric they would track. As an example, some companies aimed to pick up passengers within 8 to 10 minutes of a passenger's request for a taxi. If the system does not track wait times, companies used trip cancellation statistics as a proxy to indicate whether there were enough taxis to meet demand.

Longer Term Performance Targets

Whatever targets are set, taxi companies are encouraged to go beyond day-to-day operations and also set a few key long-term performance targets. The day-to-day targets may be converted to longer term targets if statistical summaries can be generated. Monitoring longer-term targets can help companies enhance their understanding of their businesses and identify changes in the market. It can expand their capacity to know when additional vehicles are needed. As well, it gives them data to include in an application that may help to show that a public need exists for more taxis.

Recommendation 5

Taxi companies should set some key long-term performance standards (targets) that can be monitored with the statistical data they have.

Optimizing Applications with Performance Target Information

Taxi companies pay attention first to supply indicators for satisfied passengers (e.g. reasonable wait times), and second, to service demand indicators that driver revenue expectations are met. General Managers were using the systems and information they had to maintain a balance that meets both the transportation needs of passengers and revenue needs of drivers. That is, taxi companies are continually managing a business tension between demand from passengers and the supply of taxi services (while meeting driver expectations)..

Taxi companies are in a position to optimize their businesses and profitability when they have statistics and targets that give them timely information on both the supply and demand sides of the equation. The statistics they have affects which targets they may assess over time. Also, local market conditions will affect which targets are appropriate for a company. For example, we heard from one General Manager that drivers in medium-sized cities expect to work full-time. This creates scheduling constraints. Although performance targets are generally useful and beneficial for taxi companies, the targets themselves will vary from company to company. Taxi companies are encouraged to include the following information in their applications:

1. Quantified targets used for monitoring both passenger service needs (e.g. wait times, trip cancellations) and driver expectations (e.g. trips per hour).
2. Statistical data that shows trends relating to the performance targets over time (the Board recommends at least two years of data).

The Board will not know what targets a company set, or why it chose a particular target. When completing applications, applicants should assume that the Board does not know why particular targets are chosen. In the event that taxi companies provide this information in their application, it is important they explain its relevance to their request for more vehicles. It can help the Board understand how an applicant looks at its operation.

In addition, applicants should provide historical data that relates to the targets. Anyone could come up with an unachieved target and very short-term data to justify more taxis. Data is needed to show whether the target has been met or nearly met in the past, and to show a longer term trend.

Recommendation 6

Taxi companies should adopt the practice of including performance targets and relevant historical data with applications for more vehicles (AV applications).

Ongoing Collection and Posting of Taxi Performance Data

In March 2012, Vancouver City Council approved a resolution which stated:

THAT Council ask the Passenger Transportation Board to set requirements for ongoing and standardized reporting metrics for taxi companies on trip volumes, wait times and taxicab availability for the purpose of evaluating taxi service levels and the impacts of changes in taxi service.

Some jurisdictions in North America collect performance data reports from taxi companies and post it online⁴.

The Passenger Transportation Board has established data requirements for taxi applicants seeking additional taxis⁵. When the Board makes a decision on applications, it posts written decisions on its website. Decisions may include a summary of the data provided by the applicant that the Board found relevant to its decision. Unlike local governments and some other jurisdictions in North America, the Board does not have authority or the resources to require companies to provide performance data to the Board outside the application process. The Board requests such performance data from companies applying for more taxis. The Board may also receive some statistical data from submitters. A challenge to the current regulatory system is that aggregate data for all taxi companies in a community is not available to the Board.

In November 2013, the Board surveyed local governments in British Columbia about taxi standards. Representatives of seven cities responded. None had set performance standards for taxi companies. Representatives of two local governments commented on the discussion paper. Both indicated that the immediate benefits are low and that their cities lack the resources and infrastructure to manage the process. One individual commented that enabling legislation might be needed.

Also in follow up to the discussion paper, a taxi association representative opposed 'proactive data reporting'. A number of reasons were stated: business confidentiality, financial cost on taxi companies, and comparing data for different companies may produce misleading conclusions due to differences in data collection systems and practices.

Some local government acknowledged that the reporting of taxi performance data could be a benefit either now or in the future. As well, they noted that they do not necessarily have the authority to require the data themselves, or they do not have the resources and supporting infrastructure for the collection of such data to be worthwhile. The Board recognizes these constraints which apply to the Board as well.

⁴ Las Vegas, Los Angeles and New York are notable examples.

⁵ See [Application Guide 3: I want to add taxis to my fleet](#).

Board Comment: Establishing pro-active collection and reporting of taxi performance data has potential regulatory benefits for local governments and passengers. At present, this idea is beyond the Board's mandate to put into practice. Taxi companies that want to promote their service may publish such data voluntarily.

Conclusion

The Taxi Standards Project centres on collecting and reporting data, and on performance targets.

The collection and reporting of appropriate data assists taxi companies in providing appropriate data to the Board when applying for additional taxis. Reliable data and relevant reports enhance the Board's understanding of a taxi company's operations.

Performance targets assist companies in managing day-to-day operations as well as identifying when it's time to make an additional vehicle application. Longer term targets with historical data provide information on multi-year trends which is helpful to the Board in reviewing applications for additional vehicles.

The Board learned about current operations and practices of taxi companies by interviewing directors or General Managers in large and medium sized municipalities. A number of specific findings are set out in this report. The Board has taken a solutions-oriented approach with taxi companies to address the data-related technical challenges they face. The report should enable taxi companies to enhance and benefit from their usage of statistical data and longer-term performance standards. To further enable improvements, the Board committed to 4 actions it will take later in 2014. As well, the Board is making 6 recommendations for steps that taxi companies can take that should benefit individual companies and the industry as a whole.

As taxi markets and information technologies evolve, the types of issues addressed in this report are likely to grow more important. This report and its outcomes may be viewed as more of a starting place than a conclusion.

Appendix: List of Actions & Recommendations

This appendix consolidates Board actions and recommendations for the taxi industry.

Board Actions

The Board will take 4 follow-up actions in 2014:

A: Standard Definitions

Create a standard set of definitions for data-related terms (e.g. wait times) used by taxi companies and the Board when submitting and reviewing applications for additional taxis.

B: Standard System Attributes

Establish a core set of attributes (i.e. selected trip data details) that taxi companies may use to ensure that raw data collected by their dispatch systems is relevant to applications for additional taxis.

C: Applicant Attestation of Data Accuracy

With agreement of the Ministry of Transportation and Infrastructure, the Board will update existing application forms and application materials for additional taxis to add an explicit reference that signing the application attests to the accuracy of data provided.

D: Technical Meeting

The Board will host a meeting in Fall 2014 and invite about a dozen technically-minded representatives of taxi companies in the province. The meeting will focus on Board Actions A and B, and on Taxi Industry Recommendations 1 and 3.

Board Recommendations for the Taxi Industry

The Board is making the following 6 recommendations for taxi companies:

1. Comment on '2013 Spreadsheets'

Taxi companies provide comments to the Board on the new '2013 spreadsheets' to identify limitations and needed improvements.

2. Review Data Retention Schedule

Taxi companies should review their current data retention schedules to ensure that data is retained for two years or longer.

3. Industry Collaboration on New Reporting Solutions

Taxi associations or groups of companies should consider working together and pooling resources to negotiate the development of integrated reporting solutions with dispatch companies or third party software developers.

4. Track Statistics for Any New Dispatch Technologies

When new dispatch technologies are adopted (e.g. smartphone apps), integrate statistics for the new dispatch methods with other dispatch statistics to provide a complete picture of operations. Taxi companies may ask dispatch system companies for reporting packages that are 'smartphone-ready' and 'auto-dispatch-ready'.

5. Establish Longer-Term Performance Targets

Taxi companies should set some key long-term performance standards (targets) that can be monitored with the statistical data they have.

6. Voluntarily Report Performance Targets and Historical Data with AV Applications

Taxi companies should adopt the practice of including performance targets and relevant historical data with applications for additional vehicles (AV applications).