Canadian Transportation Agency
Office des transports du Canada

# Performance Measurement Framework

## For The

# Canadian Transportation Agency

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# 1. Overview

## 1.1 Introduction

Over the past number of years, public sector organizations have increasingly recognized the need to develop and deploy performance measurement systems in order to remain high-performance organizations. One of the four key elements of the federal government's new Modern Comptrollership initiative focuses on performance measurement. This is also one of the four priority improvement areas identified by the Canadian Transportation Agency (herein referred to as the Agency or CTA) in its *Management Excellence Action Plan*.

The importance of performance information and measurement has also been articulated in the *Results for Canadians* document, issued by Treasury Board in May 2000, entitled "*A Management Framework for the Government of Canada*". This report outlines a modern management agenda for the federal public service that looks beyond activities and outputs and focuses on actual results – the impacts and effects of federal programs. This requires departments, such as the CTA, to clearly define and articulate the desired results, deliver the programs and recommendations, measure and evaluate performance and make the necessary adjustments to improve both efficiency and effectiveness. The report acknowledges that this is a significant and challenging undertaking, and even more so for small departments with limited resources.

Following the release of the new management framework, in April, 2001 Treasury Board issued an Evaluation Policy "*to ensure that the government has timely, strategically focused, objective and evidence-based information on the performance of its policies, programs, and initiatives to produce better results for Canadians*". This new policy requires the CTA to embed evaluation into its management practices in order to help design policies, programs and initiatives that clearly define expected results and that embody sound performance measurement, reporting and accountability provisions at their outset. In addition, evaluation will help assess, in a rigorous and objective manner, the results for government policies, programs and initiatives, including their impacts, both intended and unintended, and alternative ways of achieving expected results. By developing and deploying an effective performance measurement system, the Agency will also be fulfilling the objectives of this new policy.

## 1.2 Purpose of the Performance Measurement Framework

The purpose of this Performance Measurement Framework is to provide a consistent approach for systematically collecting, analyzing, utilizing and reporting on the performance of the Canadian Transportation Agency's programs and activities. This framework is a management tool that will enhance the management and reporting of the CTA's programs and activities by measuring the organization's level of achievement of results. It will enable managers to make more informed and effective choices and decisions about their programs and activites.

## 1.3 Link Between Performance Measurement and Financial Information

Performance measurement is linked to financial information in a variety of ways. On a macro level, the CTA operates a single business line and receives an appropriation from Parliament of approximately $26.7 million to fulfill its mission "*to administer transportation legislation and government policies to help achieve an efficient and accessible transportation system by education, consultation and essential regulation*". This mission flows from the CTA's mandate under the *Canada Transportation Act*. By measuring performance towards achieving our desired outcomes and ultimate results, the Agency will be in a better position to objectively assess and report on results. Through the financial system (CDFS), the Agency is able to manage, monitor and report on the agency's organization-wide financial performance as a whole as well as for each of its branches.

Like most federal departments and agencies, the CTA's salaries make up a substantial portion of the total budget. However, the salary management system, used by CTA and most other federal departments and agencies, does not include a time-reporting mechanism to capture and report time spent on key activities or initiatives. As such, the Agency is not able to easily monitor and report on total costs, including salaries, for its programs. Recognizing that a new time reporting system would be costly and time consuming to implement and maintain, we will examine opportunities to leverage and adapt the Agency's existing financial system and data to better integrate the financial and non-financial information.

## 1.4 Benefits of a Performance Measurement System for the CTA

There are numerous benefits to any organization that develops and deploys an effective performance measurement system. It is often said that you can't effectively manage what you don't measure. Although the CTA has developed a comprehensive Strategic Plan, the agency does not currently utilize a formal, objective process or system to systematically collect, analyze, deploy and report performance information both at the corporate level and for each of the programs. By developing such a system, the Agency will be in a position to utilize concrete, objective information and data on which to make sound management decisions and report to clients, stakeholders and Canadians.

A performance measurement system will also enable the CTA to improve its ability to plan, manage and measure performance through the development and use of performance indicators and evaluation frameworks. This, in turn, will provide the Agency's senior management team with timely information on the relevance, success and cost-effectiveness of programs and activities.

A further benefit of a performance measurement system is that it can lead to a set of "best practices" and "lessons learned" that can be used internally to improve the Agency's management practices and program activities. These lessons learned and best practices can also be shared with other federal tribunal and quasi-tribunal agencies, thereby facilitating the development of tools and ideas that can benefit the broader federal regulatory community.

## 1.5 Challenges and Limitations of Performance Measurement

Performance measurement is a management system, intended to provide decision makers and management with concrete data and information on which to make sound decisions and continuously improve performance. It is not, however, an exact science nor should it be viewed as such. This is often because accurate data may not be available to tell the whole story or that the cost of obtaining more refined information outweighs the benefits such information could provide. Recognizing that the CTA will most likely need to develop and gather some new performance information and data in order to effectively measure and monitor performance, data and information that is already collected and available should be utilized wherever possible. This is a cost-effective, practical approach that enables the Agency to integrate performance measurement into the various programs versus adopting a separate, stand-alone process or system.

Another limitation of performance measurement for the CTA is that there is often not a clear link between the decisions rendered by the Agency and the ultimate efficiency and accessibility of our national transportation system – the attribution challenge. This is a common challenge for many public sector organizations. The outcomes are inevitably affected by many factors outside the individual agencies or department's control. This holds true for a public sector agency such as the CTA, where the agency is just one of many players who help provide an efficient and accessible national transportation system. Due to the many partners and players involved in this process, we are not able to clearly attribute the efficiency and accessibility of the system solely to CTA. However, despite this attribution challenge, by objectively measuring and reporting on our performance, we will be able to effectively demonstrate our contribution to this ultimate result.

Effective performance measurement systems should raise a "red flag" that something is wrong; however, the information doesn't always provide the reason. This is particularly applicable for organizations such the CTA that operate dispute-resolution mechanism (i.e. formal tribunal, mediation, complaints processor) where the focus is often more on the process itself versus the ultimate decision. This highlights the need to factor qualitative performance indicators into CTA's performance measurement process.

Despite the various challenges or limitations of performance measurement, the benefits of developing a more systematic process for gathering, analyzing, deploying and reporting performance clearly outweighs the limitations or challenges of measuring performance.

## 2. Performance Measurement Principles

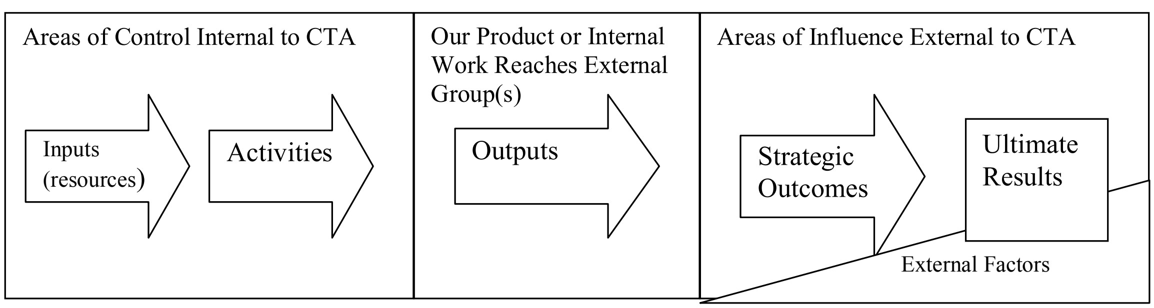
In order to measure performance on a consistent basis across the organization, the following five principles have been developed to help guide this process for the CTA:

1. Outcomes and results must be clearly defined;
2. The performance measurement system, including data collection, should be simple and cost-effective;
3. The performance measurements system should be positive, not punitive.
4. Performance indicators should be simple, valid, reliable, affordable and relevant to the activity or process being measured; and
5. Performance indicators will be reviewed and improved on an ongoing basis. It is only by gaining experience measuring performance that you can really refine and improve the process.

## 3. Program Management Process

The program management process is the overall, generic process that helps to guide the results of an organization, both at the strategic, organizational level and at the program level. This process is made up of **inputs, activities, outputs, strategic outcomes (immediate and intermediate) and ultimate results**. This process is very useful in that it helps to focus our thinking on what it is we are really trying to measure. Outputs, outcomes and ultimate results are commonly used to describe the different level of results. It is useful to look at this process as a sequence of cause-effect relationships, in which each level of the results is related to the next higher one by means of achieving the previous one. Figure 1 provides a graphical illustration of this concept.

**Figure 1 - The Program Management Process**




**Source:** Results-based Management and Accountability Frameworks Guidance, Treasury Board Secretariat, Government of Canada, August 2001

The cause and effect linkages can be expressed as "if…then" statements, representing the internal logic of the program/project/process. For example, "if" the outputs are achieved as expected, "then" we should achieve the outcome, and; "if " the outcomes are achieved as expected, "then" we should achieve the ultimate results.

Through the development and implementation of this new system, we will look to integrate this generic program management process within the existing programs and key initiatives. In doing this, we will be in a position to clearly define, measure, monitor and report on the key results for each of the CTA's programs in a consistent fashion. This will strengthen decision-making by providing objective information to help determine if we are doing the right things, and doing them well, in order to achieve the agency's strategic outcomes.

# 4. Key Steps for Measuring Performance

As mentioned above, there is no single, correct way to measure performance. There are however, some key, logical steps to developing an effective performance measurement system for the CTA. These steps are as follows:

## 4.1 Develop a Basic Results Chain

In order to demonstrate how our activities and outputs are expected to lead to the achievement of our ultimate results, we need develop a basic results chain. This results chain helps to ensure we clearly link our resources, activities and outputs to our strategic outcomes and ultimate results. It enables us to connect our appropriation from Parliament to the ultimate result we strive to achieve as an organization; namely, to *help achieve an efficient and accessible national transportation system.* Most importantly, as it may take years for us to achieve this ultimate outcome, this results chain identifies the strategic outcomes that demonstrate our progress towards the achievement of this ultimate result.

**NOTE:** a draft Results Chain for CTA will be provided under separate cover.

Similar results chains should be developed for each of CTA's key programs and initiatives so as to ensure that we have an effective "road map" that outlines this linkage between allocated resources and expected outcomes and results for each of our programs. As previously noted, for new CTA programs, this results chain should be developed at the outset of the program, during the scoping or program-planning phase.

It is important to keep in mind that developing a results chain is an **iterative process**. It is really only through soliciting feedback that we are able to critically review the results chain and make the necessary revisions. Although one often reads a results chain from the inputs upwards to the ultimate results, in order to effectively develop a results chain as a key planning tool for new programs, you should first determine "*What is the ultimate result we are trying to achieve by embarking on this new program?"* – this is also often described in terms of "*What is the high level **problem** we are trying to solve*?" Following from the high level ultimate results, we then need to ask ourselves what are the strategic outcomes we expect to achieve that will demonstrate our progress towards achievement of this ultimate result. It is only by clearly determining the key strategic outcomes and ultimate results that we can determine what outputs we need to produce and what activities we need to carry out. The inputs (financial and human resources) required should then be determined based on the key activities that are required. Figure 3, outlines the key questions that provide the necessary guidance for constructing a basic results chain for CTA:

**Figure 2 – Constructing a Basic Results Chain**

| | |
|---|---|
| **Ultimate Results** | **<u>WHY?</u>**<br>Why do we carry out this program or initiative? What is it we ultimately expect to achieve, recognizing that it may take years, even decades to achieve this ultimate result(s)? |
| **Strategic Outcomes** | **<u>WHAT?</u>**<br>What do we expect to see or hear as a result of our outputs and activities?<br><br>**WHO? and WHERE?**<br>Who do we need to engage and reach and where?<br><br>The strategic outcomes are often referred to as the behavioral changes that arise as a result of our work. |
| **Outputs** | **HOW?**<br>**The outputs, activities and inputs are effectively the operational elements required in order to achieve the strategic outcomes.**<br><br>What **outputs** (i.e. decisions and orders, codes of practice etc.) in order to achieve the expected strategic outcomes? |
| **Activities** | What key **activities** do we need to undertake in order to effectively contribute to the strategic outcomes? |
| **Inputs** | What **inputs** (financial and human resources) do we have to carry out key activities? |

## 4.2 Identify and Select Performance Indicators

In order to measure performance on an ongoing basis, we need to identify and select performance indicators that will tell us whether we produced an effective product (i.e. codes of practice and reservation checklists), carried out key activities (i.e. processed air travel complaints, held consultations with key stakeholder groups in a particular transportation sector) or achieved a specific outcome (i.e. greater accessibility to air, rail and ferry transportation for persons with disabilities; increased awareness and understanding of the rights and obligations of Canadian carriers and transportation users;

effective resolution of federal transportation issues). There are two types of performance indicators as follows:

a. **Quantitative indicators –** these are numeric or statistical measures that are often expressed in terms of unit of analysis (the number of, the frequency of, the percentage of, the ratio of, the variance with, etc.). For example, an indicator of a successful tribunal process may be the number of decisions issued within the 120-day timeframe or the number of targeted stakeholders who attended CTA consultation meeting(s). A common quantitative indicator is whether the program, activity or event was on budget and on time, with an explanation of any significant variances.

b. **Qualitative indicators –** qualitative indicators are judgment or perception measures. For example, this could include the level of satisfaction persons with disabilities or their umbrella associations have with new codes of practice and the removal of undue obstacles. It could also include feedback from industry representatives on the effectiveness of CTA's tribunal, complaints and mediation processes for resolving disputes. Often qualitative indicators may be quantified. For example, we may quantify the number or percentage of people/organizations who felt CTA's codes of practice were very useful, somewhat useful, not very useful.

It is a common myth that quantitative indicators are inherently more objective and useful than qualitative indicators. What is important is that we utilize a balanced set of quantitative and qualitative indicators in order to measure progress towards achieving a particular program or strategic objective. Common practice seems to indicate that is reasonable to select 3 indicators for each performance measure (one quantitative, one qualitative and one of your choosing).

Although there is no clear format or magic to selecting performance indicators, the following four criteria should be utilized in determining the most appropriate indicators to measure performance:

1. **Validity** – Does the indicator allow you to be precise in measuring the results (quantity, quality, timeframe)?
2. **Relevance** – Is it relevant to the activity, product or process being measured
3. **Reliability** – Is it a consistent measure over time. This is particularly important when selecting quantitative indicators?
4. **Simplicity** – Is the information available and will it be feasible to collect and analyze it?
5. **Affordability** – Can we afford to collect and analyze the information?

## 4.3 Set the Performance Targets or Benchmarks

The performance target or benchmark is the "goal" against which you will measure the actual performance. If you do not set some form of target or benchmark for each of the performance indicators, you will not have a point of reference to compare your actual results against. For example, for disputes resolution, may look to set a target related to new tools developed to improve accessible transportation – say, 80% of travel agencies surveyed report that the reservation checklist helps them meet the needs of customers with disabilities.

## 4.4 Develop a Performance Measurement Plan

In order to effectively measure actual performance against the set targets or benchmarks, you need to establish a plan for collecting and analyzing the necessary performance data or information. This plan must describe the methods and techniques of collection and analysis and the frequency of collection. It also needs to clarify and confirm the roles and responsibilities for each of these tasks.

This plan should assess the availability of the data sources, the feasibility of the collection methods and the identification of any potential problems. As noted above, we should first focus on existing data and collection in order to maximize value from existing performance data and information. If we are to utilize a survey as the data collection method, we must first develop a questionnaire designed to capture the necessary information.

Once we have determined the data sources and collection methods, the question of the frequency of the data collection must be addressed in the plan. Information on a targeted stakeholder group may have to be captured initially in order to establish a baseline level of information against which to measure the achievement of the output or outcomes. As outputs are the short-term, logical consequence of activities, information gathered on the achievement of outputs provides ongoing, useful information for the managing and continuously improving the performance of programs. Outcomes, which are the more medium-term logical consequence of a combination of outputs, really only manifest themselves after a combination of outputs have been achieved.

The performance plan must also determine who is responsible for gathering, analyzing and reporting on the performance data or information. Some of the considerations for determining who should be responsible are the logical fit of these responsibilities with staff member's regular responsibilities and existing workload, the timeframe and other budgetary pressures. As an aim of designing an effective performance measurement framework for the CTA is to integrate it into the ongoing operations of the organization, it would be advantageous to keep the responsibility for this in-house as much as possible. An exception to this may be responsibility for measuring the CTA's performance against the strategic outcomes for the organization as a whole. For example, if improvements to the transportation legislative framework encompass all modes of transportation, it may not be feasible or practical to have the responsibility for measuring the achievement of this objective simply tacked onto the responsibilities of an existing staff member.

Although the performance measurement plan can be written up in a 2-3 page report format, the following matrix provides a graphical illustrative summary of the major components of a CTA performance measurement plan:

**Figure 3 - Matrix for the Performance Measurement Plan**

| Outcomes | Performance Indicators | Data Sources | Collection Methods | Frequency | Person(s) Responsible |
|---|---|---|---|---|---|
| Reflect those outcomes outlined in the results chain. | As noted in step 2 above, select both quantitative and qualitative indicators, consistent with the 4 criteria noted above as follows:<br>1. Valid<br>2. Relevant<br>3. Reliable<br>4. Simple<br>5. Affordable | As noted above, we will utilize existing data sources as much as possible. | The collection methods will depend on the data sources, followed by new sources such as surveys, interviews etc. | Describe how often you will gather the performance information. | Determine the person or persons responsible for providing and/or gathering the performance information and data. |

## 4.5 Capture and Analyze the Performance Information

In accordance with the performance measurement plan, we need to capture and analyze the performance data and information. By capturing and analyzing performance information on an ongoing basis, we will be in a position to more effectively monitor and manage our programs. This will enable us to be alerted to potential problems at the outset and take the necessary corrective action or improvements to get the program “back on track”.

## 4.6 Interpret the Findings and Take Corrective Action as Necessary

Once you have analyzed the performance data and information, you then need to interpret the information in order to ascertain whether the objectives have been met, and if not, why not. In cases where the objectives aren’t being met, you most likely will need to develop an action plan to correct this. For example, if feedback from associations and organizations representing persons with disabilities indicate that a new tool you are piloting does not address a particular key undue obstacle or issue it is targeted to address, you would want to know about this and make the necessary modifications prior to releasing it more broadly.

## 4.7 Communicate the Results

Once we have the findings of our efforts, it is important that we effectively communicate these results. On a formal level, we should report our progress towards achieving our outcomes and ultimate results in our annual Performance Report that we are required to prepare each year. We should also use the results internally to senior management and the Executive Committee. This also enables us to develop "best practices" and "lessons learned" that can strengthen management practices and activities on existing and future CTA programs, processes and initiatives.