



Transportation
Safety Board
of Canada

Bureau de la sécurité
des transports
du Canada

2021–22 Departmental Results Report

Transportation Safety Board of Canada

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Canada 

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From the Chair

Closing the 2021–22 fiscal year opens the opportunity to reflect on the Transportation Safety Board of Canada's (TSB) achievements and challenges over the year. 2021–22 was also the first year of the TSB's new five-year Strategic Plan, which outlines the agency's key priorities to 2025–26, and it was also the second year of the COVID-19 pandemic.

First and foremost, the TSB continued to be a world leader in transportation safety investigation. As we pursued our vital work remotely and started to move into a hybrid work environment, our attention stayed fixed on determining what happened and why; sharing what we've learned through public reports on occurrences in all four federally regulated modes of transportation (air, marine, pipeline, and rail); and strengthening the impact of our work.

The TSB saw an increase in major investigations as a result of accidents in 2019. While each of these investigations represents a chance to acquire new information important to improving transportation safety, the scope and size of these investigations made it challenging to meet target timelines for final reports, not only for modal branches but also for those that provide services to all investigations: the TSB Engineering Laboratory, Human Factors, Macro Analysis, and Communications.

Nevertheless, the TSB released a number of substantial investigation reports in 2021–22.

In May 2021, we released our report into the grounding of the passenger vessel *Akademik Ioffe* in the Canadian Arctic, including a new recommendation directed to Transport Canada and Fisheries and Oceans Canada that they develop and implement mandatory risk mitigation measures for all passenger vessels operating in Canadian Arctic coastal waters.

In October 2021, we released our report into a fatal aircraft accident on the territory of the Fond-du-Lac Denesūliné First Nation in Saskatchewan, for which we had issued two recommendations to Transport Canada in 2018.

Most recently, in March 2022, we released our report into the fatal loss of control and main-track train derailment near Field, British Columbia, in which we issued three recommendations to enhance safety of train operations in cold weather through mountainous territory.

Despite the challenges presented by workload and the pandemic, the TSB has made strong progress in advancing transportation safety through the impact of our safety communications. TSB recommendations are the strongest tool available to the Board to reduce safety deficiencies posing significant risks to the transportation system. Ministers are required by legislation to respond to TSB recommendations within 90 days, and the Board regularly analyzes the progress made by regulators and industry.

We are pleased to have closed two recommendations for which responses were assessed as Fully Satisfactory, though our work revealed the need for the Board to issue five new recommendations in 2021–22. Since 1990, the Board has made 617 recommendations. By the end of 2021–22, it had given 84.1% of the responses to these recommendations the highest rating of Fully Satisfactory. This means that regulators and industry have worked to substantially reduce the safety deficiencies identified by the Board.

In addition, relaxed COVID-19 protocols allowed the TSB to do more in-person outreach to regulators, industry stakeholders, and the public. Board members presented in person at the Air Transportation Association of Canada conference in Montréal in November 2021, for example, where they engaged with industry on the most pressing issues facing aviation operations in Canada. This and other meetings, as well as consultations held in 2021 and 2022, helped develop the next edition of the TSB’s Watchlist—identifying the most pressing systemic safety problems in Canadian air, marine, and rail transportation—that will be released in the fall of 2022.

Throughout the year, the TSB underwent some changes in its senior staff, including the arrival of a new Director of Rail/Pipeline investigations, and the appointment of a new Director of Operational Services from within the organization.

I am very proud of the work done by the TSB over the past year. Through all the challenges we faced, our staff stepped forward with determination and resilience, resolved to drive transportation safety in Canada to even higher levels.

Kathleen Fox

Results at a glance

2021–22 Transportation Safety Board of Canada (TSB)

Resource Utilization

Financial: \$35,936,917

Human: 226 full-time equivalents

- The overall number of accidents in all modes reported in 2021 was 2% higher than the 2020 level; however, this is 9% below the 10-year average.
- There were 10% more fatalities in 2021 across all transportation sectors than in 2020. When compared to the 10-year average, this represents a 23% decrease.
- In 2021–22, the TSB began 54 new investigations, completed 39 investigations and had 74 investigations in progress at year-end.
- The Board reassessed two outstanding recommendations as Fully Satisfactory and issued five new recommendations in 2021–22, which brings the TSB to an overall total of 84.1% of responses to its recommendations assessed as Fully Satisfactory.
- In 2021–22, the TSB completed and released the final reports for three complex investigations: the 2018 grounding of the passenger vessel *Akademik Ioffe* in the Canadian Arctic, the 2017 fatal aircraft accident in Fond-du-Lac Denesūliné First Nation in Saskatchewan and the 2019 fatal loss of control and main-track train derailment near Field, British Columbia. The final reports can be found on the TSB website.
- The TSB held mid-cycle consultations with industry stakeholders in 2021–22 to collect feedback for its Watchlist 2022, which will continue to highlight key safety issues in the Canadian air, marine, and rail transportation sectors.
- In line with its objective of becoming digital by default, the TSB has continued its work on various IT projects and updates. In 2021–22, the TSB moved into the implementation phase of its project tracking tool which is designed to better manage the workflow of the TSB’s ongoing projects as well as moved its email system to the cloud.
- With the easing of COVID-19 pandemic restrictions, the TSB is continuing to adapt its work arrangements to provide flexibility for in-office and remote work environments.

For more information on the TSB’s plans, priorities and results achieved, see the “Results: what we achieved” section of this report.

Results: what we achieved

Core responsibilities

Independent safety investigations and communication of risks in the transportation system

Description

The Transportation Safety Board of Canada's sole objective is to advance air, marine, rail and pipeline transportation safety. This mandate is fulfilled by conducting independent investigations into selected transportation occurrences to identify the causes and contributing factors, and the safety deficiencies evidenced by these occurrences. The Transportation Safety Board of Canada makes recommendations to reduce or eliminate any such safety deficiencies and reports publicly on its investigations. The Transportation Safety Board of Canada then follows up with stakeholders to ensure that safety actions are taken to reduce risks and improve safety.

Results

The achievement of the TSB's mandate is measured through three types of departmental result indicators. First, some performance indicators aim at reporting upon the overall safety of the transportation system. However, many variables influence transportation safety and many organizations play a role in this ultimate outcome. There is no way to directly attribute overall safety improvements to any specific organization. Accident and fatality rates are used as the best available indicators. In recent years, these indicators have generally reflected positive advancements in transportation safety.

The TSB's departmental results are also measured through actions taken by its stakeholders in response to its safety communications, as well as through efficiency indicators. The TSB must present compelling arguments that convince "agents of change" to take actions in response to identified safety deficiencies. The responses received, the actions taken and their timeliness are good indicators of the TSB's impact on transportation safety. The TSB actively engages with stakeholders in all modes. However, the established performance targets vary by mode to reflect the different baselines and the differing challenges from one mode to another. Currently, the greatest challenges are with the timeliness of TSB investigation reports.

Organizational priorities

The TSB Strategic Plan outlines the strategic objectives and associated priorities that have been identified by senior management to achieve its strategic outcome. This plan provides the framework that guides the identification of key activities and the TSB's investment decision making for the current exercise. The progress related to the TSB's five-year Strategic Plan for the period of 2021–22 to 2025–26 is outlined below.

Strengthen the impact of our investigations

The TSB sought ways to improve how it conducts investigations in order to provide credible, transparent and timely results that inform and influence the advancement of transportation safety in Canada and abroad. In 2021–22, the TSB made concerted efforts to improve the timeliness of its investigation reports by putting in place a continuous improvement framework and process. A review of the Class 4 occurrence process was also launched.

In addition, the department will continue initiatives aimed at making optimal use of technology to achieve the best possible outcomes with efficient, interconnected and nimble processes and systems. A project management system was implemented to ensure improved management of TSB resources and timely completion of laboratory projects associated with TSB investigations.

Finally, the TSB continues its engagement in the Laboratories Canada initiative in developing a joint collaborative science facility in partnership with the National Research Council of Canada.

Foster an inclusive, diversified and respectful workplace

The TSB is committed to foster a respectful, harassment-free, diversified and inclusive workplace. In 2021–22, the TSB worked on improving its staffing processes by identifying and removing any barriers to the recruitment, retention and/or promotion of members of designated groups. The TSB's working group on mental health in the workplace was incorporated in the TSB's governance structure and made into a standing committee. In addition, the TSB continued the implementation of a pilot program on critical incident stress management and increased the amount of resources and tools available to employees. A working group was created to review psychological hazards that may impact our employees as part of their work, and a draft action plan is currently under review to address key issues.

The TSB continued its work related to its Strategy on Interactions with Indigenous Peoples. The working group on Interactions with Indigenous Peoples made changes to the TSB's internal procedures, guidance materials and resources to improve the organization's awareness and engagement towards these communities.

Finally, the TSB's management team has taken concrete action to foster an inclusive workplace in the pandemic-induced hybrid work environment. A workshop was held at the 2021 Managers Conference where managers received coaching and agreed on best practices for the organization.

Employ a knowledgeable and highly skilled workforce

This fiscal year, the TSB continued to focus on the recruitment, development, and retention of a high-performing and diverse workforce. In 2021–22, the TSB ensured that employees could enhance their skills and knowledge through various external and in-house training. In particular, the TSB introduced a new integrated learning management system (LMS365) to facilitate virtual course delivery, course registration and access to learning records. The organization also redesigned key classroom courses to make learning and knowledge transfer more effective in a virtual environment. In addition, the TSB also reviewed its internal policies and procedures, in particular, its telework policy, to address how working arrangements need to evolve as a result of lessons learned from its employees during the COVID-19 pandemic.

Leverage data to drive our choices and decisions

In 2021–22, the TSB continued the implementation of its Data Strategy to better manage data throughout its life cycle as a shared business asset. A formal governance structure was implemented. New policy requirements, processes and tools were put in place to improve data management. Various data awareness sessions were also made available to all employees. The TSB also continued to explore options to support the exchange of data with external stakeholders to create efficiencies and improve the flow of data and information. The three-phase strategy should be fully implemented by 2025–26.

Be digital by default

The TSB continued its migration to the cloud for some of its Corporate Services systems. The TSB started its use of a new Government of Canada shared financial management system which will enable the organization to better plan, analyze, execute and monitor financial activities. Improvements to network capacity to ensure employees have efficient access to workplace technology were made with further improvements expected during 2022–23. This year, the TSB migrated its email system to the cloud and more applications are expected to be migrated next year.

Communicate with impact

This year, the TSB launched an internal communications newsletter and formalized monthly virtual COO Townhall sessions to inform and engage employees. As part of the initiative to migrate Corporate Services systems to the cloud, the TSB initiated the review of its intranet to improve internal communications. The department increased its audience reach across social media by increasing the published content the newly launched Facebook and LinkedIn channels in addition to the department's Twitter channels. In 2021–22, the TSB increased its Twitter followers by 1,100 (total 26,089), LinkedIn followers by 1,100 (total 2,816) and Facebook fans by 847 (total 1,005). Furthermore, the TSB participated in 44 virtual outreach events (22 at the Board level and 22 at the program level) and issued 14 stakeholder communications, which included the Quarterly Review update and Watchlist consultation messages.

Experimentation

The TSB has not done any experimentation in 2021–22.

Key risks

The TSB recognizes the need for agency-wide integrated risk management practices to effectively manage operations and to deliver on its mandate. A key element of the TSB's risk management activities is the annual update of the Corporate Risk Profile. Six key strategic risks have been identified in the Corporate Risk Profile as representing an important threat (or opportunity) to the organization:

Keeping up with industry

The TSB's credibility and operational effectiveness could be impacted if it fails to keep pace with the technological changes in the transportation industry and if it does not evolve to ensure new data sources are properly exploited, optimally managed and fully analyzed. To this end, the TSB has implemented a data strategy and governance. Also, development opportunities were identified and employed where possible for TSB employees to remain current with technological changes in the industry.

Keeping up with workplace technology

There is a risk that TSB employees do not have access to current workplace technology tools, systems, and applications to ensure that they can deliver their work in an efficient and effective manner. There is also a need to ensure that these tools are not subject to business disruptions by third parties or other events such as natural disasters and pandemics. To this end, TSB continued the implementation of its IM/IT vision. Email service is now provided by a cloud service and network access improvements were implemented. In addition, an asset lifecycle plan is in place for all IT hardware.

Employee wellbeing

There is a need to be vigilant with respect to managing employees and their wellbeing. Due to the nature of the work performed by the TSB, employees may be exposed to significant workplace stress and emotional trauma. There is also a need to ensure that the workplace is respectful and harassment-free. To this end, our Critical Incident Stress Management (CISM) program was further improved in 2021–22. Workplace psychological hazards were reviewed and work was initiated on an action plan to mitigate the identified risks.

Operational readiness

There is a risk that the TSB may not be able to deploy in a timely manner, and to sustain operations, in certain remote regions due to the limited availability of transportation services and support infrastructure. There is also a risk that investigation deployment contingency plans will not be robust enough and sufficiently practiced to ensure a proper state of readiness. Furthermore, due to the small size of its workforce, the TSB may not be able to handle two major occurrences in the same mode at the same time. To this end, a tabletop exercise involving an occurrence in a remote location was completed in 2021. Implementation of an action plan derived from this exercise is underway.

Managing workload

Managing workload and expectations is a significant challenge. The TSB's workload (volume of activities) is influenced by the number, severity and complexity of transportation occurrences, and the workload cannot be predicted accurately. To this end, the TSB has improved its productivity dashboard to better monitor and manage workload.

Legal challenges

Organizations and individuals are more frequently challenging the TSB business processes, as well as the application of the *Canadian Transportation Accident Investigation and Safety Board (CTAISB) Act*. This puts the TSB at risk that some court rulings could negatively impact the way the TSB conducts its business. In 2021–22, the General Counsel for the TSB continued to uphold the TSB's legal position pursuant to the CTAISB Act in court proceedings throughout year in order to preserve the TSB's investigative integrity. The General Counsel for the TSB also provided regular information sessions on pertinent legal matters to all TSB employees.

Results achieved

The following table shows, for the TSB, the results achieved, the performance indicators, the targets and the target dates for 2021–22, and the actual results for the three most recent fiscal years for which actual results are available.

Notes about the indicators

Accident rate

This indicator is measured as follows:

- For Air, the rate is the number of accidents per 100,000 hours flown in Canada (excluding ultralights and other aircraft types).
- For Marine, the rate is the number of shipping accidents involving Canadian-flag commercial vessels of 15 gross tons or more (excluding passenger vessels and fishing vessels) per million vessel-kilometres.
- For Pipeline, the rate is accidents per exajoule.
- For Rail, the rate is main-track accidents per million main-track train miles.

To determine whether the target for this indicator has been met, the accident rates for the current year are compared against the 10-year average. Where the current year result is below or is equal to the 10-year average, the target is identified as met. For Marine, the metric on vessel-kilometres is only available for 2015 to 2021. For this metric, where the current year result is below or is equal to the 6-year average, the target is identified as met.

Number of fatal accidents

This indicator is measured by comparing the number of fatal accidents for the current year against the 10-year average. Where the current year result equals the 10-year average, the target is identified as met.

Average time recommendations have been outstanding (active and dormant recommendations)

The target for this performance indicator is set annually to reflect realistic goals based upon known circumstances at the time of planning.

Percentage of responses to recommendations assessed as Fully Satisfactory

The target for this performance indicator is set annually to reflect realistic goals based on known circumstances at the time of planning.

Program outcome indicators

The TSB currently measures its departmental results and program outcomes using the same set of indicators.

Air

Table 1. Air transportation system: actual results, fiscal years 2019–20 to 2021–22

Departmental results	Performance indicators	Target	Date to achieve target	2019–20 actual results	2020–21 actual results	2021–22 actual results
Transportation system is safer	Accident rate (over 10-year period)	Continue downward trend in accident rate	March 2022	Met There has been a significant downward trend in the accident rate for Canadian-registered aircraft over the past 10 years. The aviation accident rate in 2019 was 3.7 accidents per 100,000 hours flown, below the 10-year average of 4.9.	Not met There has been a significant downward trend in the accident rate for Canadian-registered aircraft over the past 10 years. The aviation accident rate in 2020 was 5.8 accidents per 100,000 hours flown, above the 10-year average of 4.7.	Not met There has been a significant downward trend in the accident rate for Canadian-registered aircraft over the past 10 years. The aviation accident rate in 2021 was 4.8 accidents per 100,000 hours flown, above the 10-year average of 4.6.
Transportation system is safer	Number of fatal accidents (over 10-year period)	Reduction in number of fatal accidents	March 2022	Not met The number of fatal accidents was 33, higher than the 10-year average of 30 and fatalities in 2019 totalled 70, higher than the 10-year average of 52.	Met The number of fatal accidents was 12, lower than the 10-year average of 30, and fatalities in 2020 totalled 16, lower than the 10-year average of 52.	Met The number of fatal accidents was 22, lower than the 10-year average of 28, and fatalities in 2021 totalled 32, lower than the 10-year average of 47.
The regulators and the transportation industry respond to identified safety deficiencies	Percentage of responses to recommendations assessed as Fully Satisfactory	77%	March 2022	Met 77%	Met 78%	Met 78%

Departmental results	Performance indicators	Target	Date to achieve target	2019–20 actual results	2020–21 actual results	2021–22 actual results
The regulators and the transportation industry respond to identified safety deficiencies	Percentage of safety advisories on which safety actions have been taken	75%	March 2022	Met 100%	Met 75%	Met 100%
The regulators and the transportation industry respond to identified safety deficiencies	Average time recommendations have been outstanding (active and dormant recommendations)	15 years	March 2022	Met 10.5 years	Not met 11 years	Met 12.1 years
Occurrence investigations are efficient	Average time to complete a class 1 safety issue investigation	730 days	March 2022	Not met 1696 days	Not applicable	Not met 1219 days
Occurrence investigations are efficient	Average time to complete a class 2 complex investigation	600 days	March 2022	Not met 686 days	Not met 704 days	Not met 1007 days
Occurrence investigations are efficient	Average time to complete a class 3 detailed investigation	450 days	March 2022	Met 428 days	Not met 488 days	Not met 491 days
Occurrence investigations are efficient	Average time to complete a class 4 limited-scope investigation	220 days	March 2022	Not met 212 days	Met 198 days	Met 203 days
Occurrence investigations are efficient	Average time to complete a class 5 data-gathering investigation	60 days	March 2022	Met 39 days	Not met 70 days	Met 16 days

Marine

Table 2. Marine transportation system: actual results, fiscal years 2019–20 to 2021–22

Departmental results	Performance indicators	Target	Date to achieve target	2019–20 actual results	2020–21 actual results	2021–22 actual results
Transportation system is safer	Accident rate (over 10-year period)	Continue downward trend in accident rate	March 2022	<p>Not met</p> <p>The 2019 accident rate for Canadian flag commercial vessels was lower than the 4-year average, and for fishing vessels was lower than the 10-year average. However, the rate for foreign commercial non-fishing vessels was higher than the 4-year average.</p> <p>The marine accident rates in 2019 were: 4.9 accidents per million vessel-kilometres for Canadian flag commercial vessels, below the 4-year average of 6.3.</p> <p>5.0 accidents per 1,000 active fishing vessels, below the 10-year average of 6.2.</p>	<p>Not met</p> <p>The 2020 accident rate for Canadian flag commercial vessels was slightly lower than the 5-year average, but for fishing vessels was higher than the 10-year average. The rate for foreign commercial non-fishing vessels was also higher than the 5-year average.</p> <p>The marine accident rates in 2020 were: 5.6 accidents per million vessel-kilometres for Canadian flag commercial vessels, below the 5-year average of 5.7.</p> <p>6.2 accidents per 1,000 active fishing vessels, above the 10-year average of 6.0.</p>	<p>Not met</p> <p>The 2021 accident rate for Canadian flag commercial vessels was lower than the 6-year average, and for fishing vessels was lower than the 10-year average. However, the rate for foreign commercial non-fishing vessels was higher than the 6-year average.</p> <p>The marine accident rates in 2021 were: 3.0 accidents per million vessel-kilometres for Canadian flag commercial vessels, below the 6-year average of 4.8.</p> <p>3.7 accidents per 1,000 active fishing vessels, below the 10-year average of 5.9.</p>

Departmental results	Performance indicators	Target	Date to achieve target	2019–20 actual results	2020–21 actual results	2021–22 actual results
				2.0 accident per million vessel-kilometres for foreign commercial non-fishing vessels, above the 4-year average of 1.6.	2.0 accident per million vessel-kilometres for foreign commercial non-fishing vessels, above the 5-year average of 1.7.	2.3 accidents per million vessel-kilometres for foreign commercial non-fishing vessels, above the 6-year average of 2.2.
Transportation system is safer	Number of fatal accidents (over 10-year period)	Reduction in number of fatal accidents	March 2022	Not met The number of fatal accidents was 13, above the 10-year average of 11.3 and the number of fatalities in 2019 totalled 17, above the 10-year average of 15.2.	Not met The number of fatal accidents was 9, below the 10-year average of 11.3, but the number of fatalities in 2020 totalled 18, above the 10-year average of 15.4.	Met The number of fatal accidents was 8, below the 10-year average of 10.3, and the number of fatalities in 2021 totalled 11, below the 10-year average of 15.6.
The regulators and the transportation industry respond to identified safety deficiencies	Percentage of responses to recommendations assessed as Fully Satisfactory	85%	March 2022	Met 85%	Met 87%	Met 87%
The regulators and the transportation industry respond to identified safety deficiencies	Percentage of safety advisories on which safety actions have been taken	60%	March 2022	Not met 33%	Not met 0%	Not met 0%

Departmental results	Performance indicators	Target	Date to achieve target	2019–20 actual results	2020–21 actual results	2021–22 actual results
The regulators and the transportation industry respond to identified safety deficiencies	Average time recommendations have been outstanding (active and dormant recommendations)	10 years	March 2022	Not met 10.6 years	Not met 11 years	Not met 10.5 years
Occurrence investigations are efficient	Average time to complete a class 1 safety issue investigation	730 days	March 2022	Not applicable	Not applicable	Not applicable
Occurrence investigations are efficient	Average time to complete a class 2 complex investigation	600 days	March 2022	Not applicable	Not met 953 days	Not met 1001 days
Occurrence investigations are efficient	Average time to complete a class 3 detailed investigation	450 days	March 2022	Not met 548 days	Not met 708 days	Not met 771 days
Occurrence investigations are efficient	Average time to complete a class 4 limited-scope investigation	220 days	March 2022	Not met 341 days	Not met 370 days	Not met 234 days
Occurrence investigations are efficient	Average time to complete a class 5 data-gathering investigation	60 days	March 2022	Met 30 days	Met 50 days	Met 16 days

Pipeline

Table 3. Pipeline transportation system: actual results, fiscal years 2019–20 to 2021–22

Departmental results	Performance indicators	Target	Date to achieve target	2019–20 actual results	2020–21 actual results	2021–22 actual results
Transportation system is safer	Accident rate (over 10-year period)	Continue downward trend in accident rate	March 2022	Met The 2019 rate was 0.0 pipeline accidents per exajoule, below the 10-year average of 0.4.	Met The 2020 rate was 0.0 pipeline accidents per exajoule, below the 10-year average of 0.3.	Met The 2021 rate was 0.1 pipeline accidents per exajoule, below the 10-year average of 0.2.
The regulators and the transportation industry respond to identified safety deficiencies	Percentage of responses to recommendations assessed as Fully Satisfactory	100%	March 2022	Met 100%	Met 100%	Met 100%
The regulators and the transportation industry respond to identified safety deficiencies	Percentage of safety advisories on which safety actions have been taken	75%	March 2022	Met 100%	Not applicable	Not applicable
The regulators and the transportation industry respond to identified safety deficiencies	Average time recommendations have been outstanding (active and dormant recommendations)	7 years	March 2022	Not applicable	Not applicable	Not applicable
Occurrence investigations are efficient	Average time to complete a class 1 safety issue investigation	730 days	March 2022	Not applicable	Not applicable	Not applicable
Occurrence investigations are efficient	Average time to complete a class 2 complex investigation	600 days	March 2022	Not applicable	Not applicable	Not applicable

Departmental results	Performance indicators	Target	Date to achieve target	2019–20 actual results	2020–21 actual results	2021–22 actual results
Occurrence investigations are efficient	Average time to complete a class 3 detailed investigation	450 days	March 2022	Not met 513 days	Not applicable	Not applicable
Occurrence investigations are efficient	Average time to complete a class 4 limited-scope investigation	220 days	March 2022	Not applicable	Not met 279 days	Not met 304 days
Occurrence investigations are efficient	Average time to complete a class 5 data-gathering investigation	60 days	March 2022	Not met 62 days	Not met 171 days	Met 41 days

Rail

Table 4. Rail transportation system: actual results, fiscal years 2019–20 to 2021–22

Departmental results	Performance indicators	Target	Date to achieve target	2019–20 actual results	2020–21 actual results	2021–22 actual results
Transportation system is safer	Accident rate (over 10-year period)	Continue downward trend in accident rate	March 2022	Not met The main-track accident rate in 2019 was 3.3 accidents per million main-track train miles, above the 10-year average of 2.3.	Not met The main-track accident rate in 2020 was 2.7 accidents per million main-track train miles, above the 10-year average of 2.4.	Not met The main-track accident rate in 2021 was 4.8 accidents per million main-track train miles, above the 10-year average of 2.5.
Transportation system is safer	Number of fatal accidents (over 10-year period)	Reduction in number of fatal accidents	March 2022	Not met The number of fatal accidents in 2019 was 68, above the 10-year average of 64.6. Rail fatalities totalled 72 in 2019, below the 10-year average of 72.8.	Met The number of fatal accidents in 2020 was 58, below the 10-year average of 64.5. Rail fatalities totalled 59 in 2020, below the 10-year average of 73.	Met The number of fatal accidents in 2021 was 59, below the 10-year average of 62.9. Rail fatalities totalled 60 in 2021, below the 10-year average of 71.

Departmental results	Performance indicators	Target	Date to achieve target	2019–20 actual results	2020–21 actual results	2021–22 actual results
The regulators and the transportation industry respond to identified safety deficiencies	Percentage of responses to recommendations assessed as Fully Satisfactory	88%	March 2022	Met 90%	Met 91%	Met 90%
The regulators and the transportation industry respond to identified safety deficiencies	Percentage of safety advisories on which safety actions have been taken	60%	March 2022	Not met 11%	Not met 13%	Met 100%
The regulators and the transportation industry respond to identified safety deficiencies	Average time recommendations have been outstanding (active and dormant recommendations)	7 years	March 2022	Not met 9.2 years	Not met 9.5 years	Not met 8.4 years
Occurrence investigations are efficient	Average time to complete a class 1 safety issue investigation	730 days	March 2022	Not applicable	Not applicable	Not applicable
Occurrence investigations are efficient	Average time to complete a class 2 complex investigation	600 days	March 2022	Not applicable	Not met 811 days	Not met 1151 days
Occurrence investigations are efficient	Average time to complete a class 3 detailed investigation	450 days	March 2022	Not met 520 days	Not met 540 days	Not met 658 days
Occurrence investigations are efficient	Average time to complete a class 4 limited-scope investigation	220 days	March 2022	Not met 219 days	Not met 374 days	Not met 299 days
Occurrence investigations are efficient	Average time to complete a class 5 data-gathering investigation	60 days	March 2022	Not met 105 days	Not met 93 days	Not met 62 days

Financial, human resources and performance information for the TSB’s Program Inventory is available in [GC InfoBase](#).ⁱ

Budgetary financial resources (dollars)

The following table shows, for Independent safety investigations and communication of risks in the transportation system budgetary spending for 2021–22, as well as actual spending for that year.

2021–22 Main Estimates	2021–22 planned spending	2021–22 total authorities available for use	2021–22 actual spending (authorities used)	2021–22 difference (actual spending minus planned spending)
27,936,216	27,936,216	28,656,637	27,655,335	(280,881)

Financial, human resources and performance information for the TSB’s Program Inventory is available in [GC InfoBase](#).ⁱⁱ

Human resources (full-time equivalents)

The following table shows, in full-time equivalents, the human resources the department needed to fulfill this core responsibility for 2021–22.

2021–22 planned full-time equivalents	2021–22 actual full-time equivalents	2021–22 difference (actual full-time equivalents minus planned full-time equivalents)
177	179	2

Financial, human resources and performance information for the TSB’s Program Inventory is available in [GC InfoBase](#).ⁱⁱⁱ

Internal services

Description

Internal services are those groups of related activities and resources that the federal government considers to be services in support of programs and/or required to meet corporate obligations of an organization. Internal services refers to the activities and resources of the 10 distinct service categories that support program delivery in the organization, regardless of the internal services delivery model in a department. The 10 service categories are:

- ▶ acquisition management services
- ▶ communication services
- ▶ financial management services

- ▶ human resources management services
- ▶ information management services
- ▶ information technology services
- ▶ legal services
- ▶ material management services
- ▶ management and oversight services
- ▶ real property management services

Results

The TSB continued to strive for full and effective use of available tools and systems and to work in a digital-first environment. In 2021–22, the department transitioned a number of systems to a cloud environment and made improvements to the network capacity. In addition, it also made progress on the implementation of its Data Strategy Plan with the establishment of a data governance structure, data awareness sessions and other activities. This year, the TSB began the implementation phase of its new project tracking tool aimed at supporting the management of TSB projects.

In addition, the department also made changes to its headquarters office environment to facilitate the transition to a hybrid workplace model focused on hoteling stations (office reservation system) and accommodating a highly mobile workforce.

The TSB’s HR division supported diversity and inclusion initiatives as well as other initiatives that affect employee wellbeing. Progress on these initiatives formed part of the TSB’s departmental response to the Clerk’s Call to Action on Anti-Racism, Equity and Inclusion.

The TSB’s Finance division continued to work in collaboration with its HR division and PSPC compensation personnel to ensure that Phoenix issues were minimized and employees were paid in a timely manner. Where appropriate, cash advances were issued to employees.

Lastly, the project to co-locate the TSB’s Head Office and Engineering Lab in a modern facility within the National Capital Region through participation in the Laboratories Canada Initiative is continuing to progress.

Budgetary financial resources (dollars)

The following table shows, for internal services, budgetary spending for 2021–22, as well as spending for that year.

2021–22 Main Estimates	2021–22 planned spending	2021–22 total authorities available for use	2021–22 actual spending (authorities used)	2021–22 difference (actual spending minus planned spending)
6,984,054	6,984,054	8,581,429	8,281,582	1,297,528

Human resources (full-time equivalents)

The following table shows, in full-time equivalents, the human resources the department needed to carry out its internal services for 2021–22.

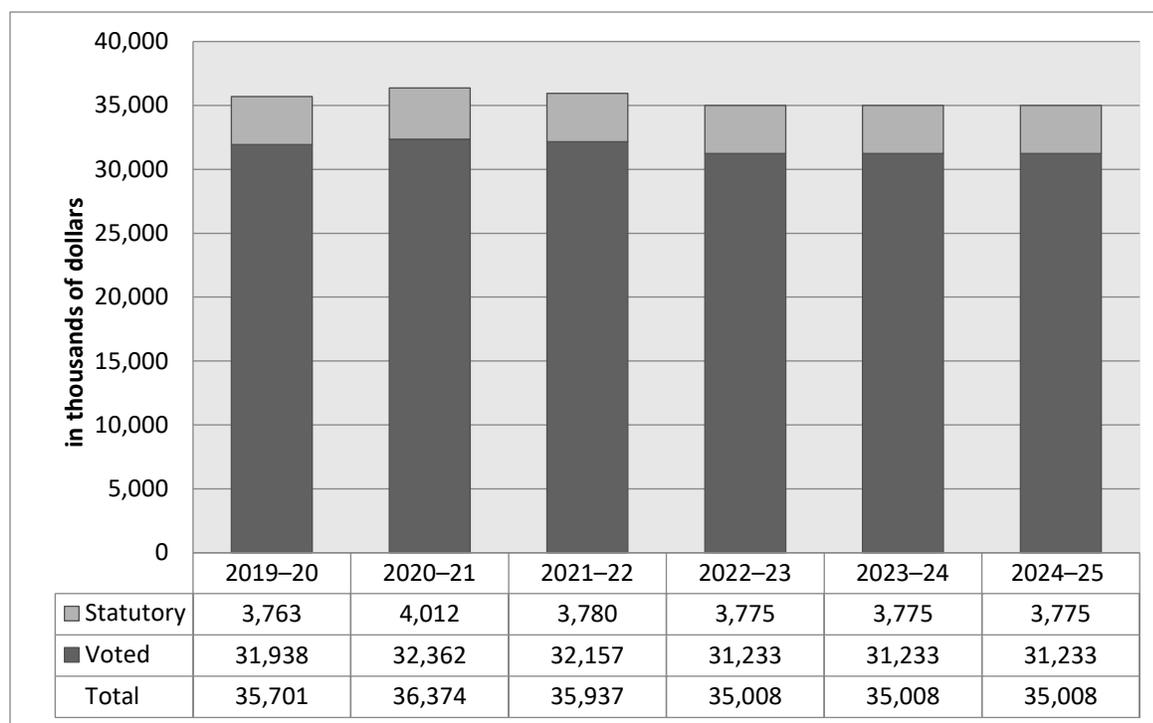
2021–22 planned full-time equivalents	2021–22 actual full-time equivalents	2021–22 difference (actual full-time equivalents minus planned full-time equivalents)
50	47	(3)

Spending and human resources

Spending

Spending 2019–20 to 2024–25

The following graph presents planned (voted and statutory spending) over time.



The departmental spending trend graph shows actual spending (2019–20 to 2021–22) and planned spending (2022–23 to 2024–25). The variation in statutory amounts over the years is directly attributable to Employee Benefit Plan allocations associated to employee salaries. Further trend analysis related to this table is provided in the following section.

Budgetary performance summary for core responsibilities and internal services (dollars)

The table below, Budgetary performance summary for core responsibilities and internal services, presents the budgetary financial resources allocated for the TSB’s core responsibilities and for internal services.

Core responsibilities and internal services	2021–22 Main Estimates	2021–22 planned spending	2022–23 planned spending	2023–24 planned spending	2021–22 total authorities available for use	2019–20 actual spending (authorities used)	2020–21 actual spending (authorities used)	2021–22 actual spending (authorities used)
Independent safety investigations and communication of risks in the transportation system	27,936,216	27,936,216	28,006,661	28,006,661	28,656,637	28,806,211	28,397,258	27,655,335
Internal services	6,984,054	6,984,054	7,001,665	7,001,665	8,581,429	6,894,275	7,976,504	8,281,582
Total	34,920,270	34,920,270	35,008,326	35,008,326	37,238,066	35,700,486	36,373,762	35,936,917

The 2019–20 to 2021–22 actual spending results are actual amounts as published in the Public Accounts of Canada. The uptick in actual spending in 2020–21 is mainly due to higher salary expenditures in the form of retroactive payments for previous years that were paid out in 2020–21 as well as in-year wage increases in accordance with signed and ratified collective agreements. Due to the worldwide COVID-19 pandemic, expenditures were partially offset by lower spending in travel expenditures in 2020–21 and 2021–22.

The significant increase of \$2.3M between 2021–22 planned spending and 2021–22 total authorities available for use is explained by the additional authorities the TSB received throughout the fiscal year:

- ▶ \$1.3M for its operating budget carry forward from 2020–21
- ▶ \$0.6M as a result of its Memorandum of Understanding (MOU) with Laboratories Canada
- ▶ \$0.4M for compensation allocations and funding to cover mandatory cash-outs for vacation and compensatory leave

In accordance with the definition of planned spending, planned amounts for 2021–22 and ongoing fiscal years are comprised of Main Estimates and Annual Reference Level amounts only. These amounts remain consistent over the planning horizon.

Human resources

The table below, Human resources summary for core responsibilities and internal services, presents the full-time equivalents (FTEs) allocated to each of the TSB’s core responsibilities and to internal services.

Human resources summary for core responsibilities and internal services

Core responsibilities and internal services	2019–20 actual full-time equivalents	2020–21 actual full-time equivalents	2021–22 planned full-time equivalents	2021–22 actual full-time equivalents	2022–23 planned full-time equivalents	2023–24 planned full-time equivalents
Independent safety investigations and communication of risks in the transportation system	173	174	177	179	177	177
Internal services	47	50	50	47	50	50
Total	220	224	227	226	227	227

In 2021–22, the TSB continued to staff and fill vacancies and as a result, the 2021–22 actual figures were very close to planned. The TSB anticipates FTEs to remain consistent for 2022–23 and onward at 227 FTEs.

Expenditures by vote

For information on the TSB’s organizational voted and statutory expenditures, consult the [Public Accounts of Canada 2021](#).^{iv}

Government of Canada spending and activities

Information on the alignment of the TSB’s spending with Government of Canada’s spending and activities is available in [GC InfoBase](#).^v

Financial statements and financial statements highlights

Financial statements

The [TSB’s financial statements \(unaudited\) for the year ended March 31, 2022](#),^{vi} are available on the departmental website.

Financial statement highlights

Condensed Statement of Operations (unaudited) for the year ended March 31, 2022 (thousands of dollars)

Financial information	2021–22 planned results	2021–22 actual results	2020–21 actual results	Difference (2021–22 actual results minus 2021–22 planned results)	Difference (2021–22 actual results minus 2020–21 actual results)
Total expenses	39,951	40,166	40,206	215	(40)
Total revenues	35	16	13	(19)	3
Net cost of operations before government funding and transfers	39,916	40,150	40,193	234	(43)

The 2021–22 Planned Results are based on estimates known at the time of preparation of the Departmental Plan and as presented in the [Future-Oriented Statement of Operations](#).^{vii} Overall planned results were in line with actual amounts with total expenses at \$40M (planned) vs. \$40.2M (actual), resulting in a 0.5% variance.

On an accrual accounting basis, the TSB’s total operating expenses for 2021–22 are \$40.2M, which is consistent with the previous pandemic fiscal year (\$40.2M). Although salaries were slightly lower this year (payouts for retroactive salaries occurred last year), they were offset by slightly higher non-salary expenses as well as a provision for newly expired collective agreements, resulting in a negligible difference between years.

The TSB’s revenues are incidental and are mainly the result of the rebate received from its supplier for the use of its TSB acquisition cards in 2021–22.

Condensed Statement of Financial Position (unaudited) as of March 31, 2022 (thousands of dollars)

Financial information	2021–22	2020–21	Difference (2021–22 minus 2020–21)
Total net liabilities	6,632	6,566	66
Total net financial assets	2,584	2,595	(11)
Departmental net debt	4,048	3,971	77
Total non-financial assets	6,343	5,938	405
Departmental net financial position	2,295	1,967	328

The TSB's total net liabilities consist primarily of accounts payable and accrued liabilities relating to operations which account for \$3.2M or 48% (42% in 2020–21) and vacation pay and compensatory leave which account for \$2.7M or 41% (45% in 2020–21) of total liabilities. The liability for employee future benefits pertaining to severance pay represents \$0.8M or 12% (14% in 2020–21) of total liabilities. The overall increase in net liabilities between years is primarily attributed to allowances for expired collective agreements for many TSB classifications including the Technical Services (TC) group as well as the Program and Administrative Services (PA) group. Contributing to the increase is the lifting of the moratorium on mandatory cash out of excess vacation and compensatory leave, which had been deferred for four consecutive years.

Total net financial assets consist of accounts receivable, advances, and amounts due from the Consolidated Revenue Fund (CRF) of the Government of Canada. The amount due from the CRF represents 94% or \$2.5M (95% in 2020–21) of the year-end balance, and is consistent with the previous fiscal year. This represents no material change in the amount of net cash that the TSB is entitled to draw from the CRF in the future to discharge its current liabilities without further appropriations. The TSB's total net financial assets have remained stable when compared with the previous year.

Total non-financial assets consist primarily of tangible capital assets, which make up \$6.2M or 98% of the balance (97% in 2020–21), with inventory and prepaid expenses accounting for the remaining 2%. The increase of \$0.4M in non-financial assets between years is mainly due to the acquisition of new assets (\$1.8M) offset by the annual amortization (\$1.3M) as well as a reduction in prepaid expenses (\$0.1M).

The 2021–22 planned results information is provided in the [TSB Future-Oriented Statement of Operations and Notes 2021–22.](#) ^{viii}

Corporate information

Organizational profile

Appropriate minister[s]: The Honourable William Blair P.C., C.O.M., M.P.

Institutional head: Kathleen Fox

Ministerial portfolio: Privy Council

Enabling instrument[s]: [*Canadian Transportation Accident Investigation and Safety Board Act*](#), S.C. 1989, c. 3^{ix}

Year of incorporation / commencement: 1990

Raison d'être, mandate and role: who we are and what we do

“Raison d'être, mandate and role: who we are and what we do” is available on the [TSB's website](#).^x

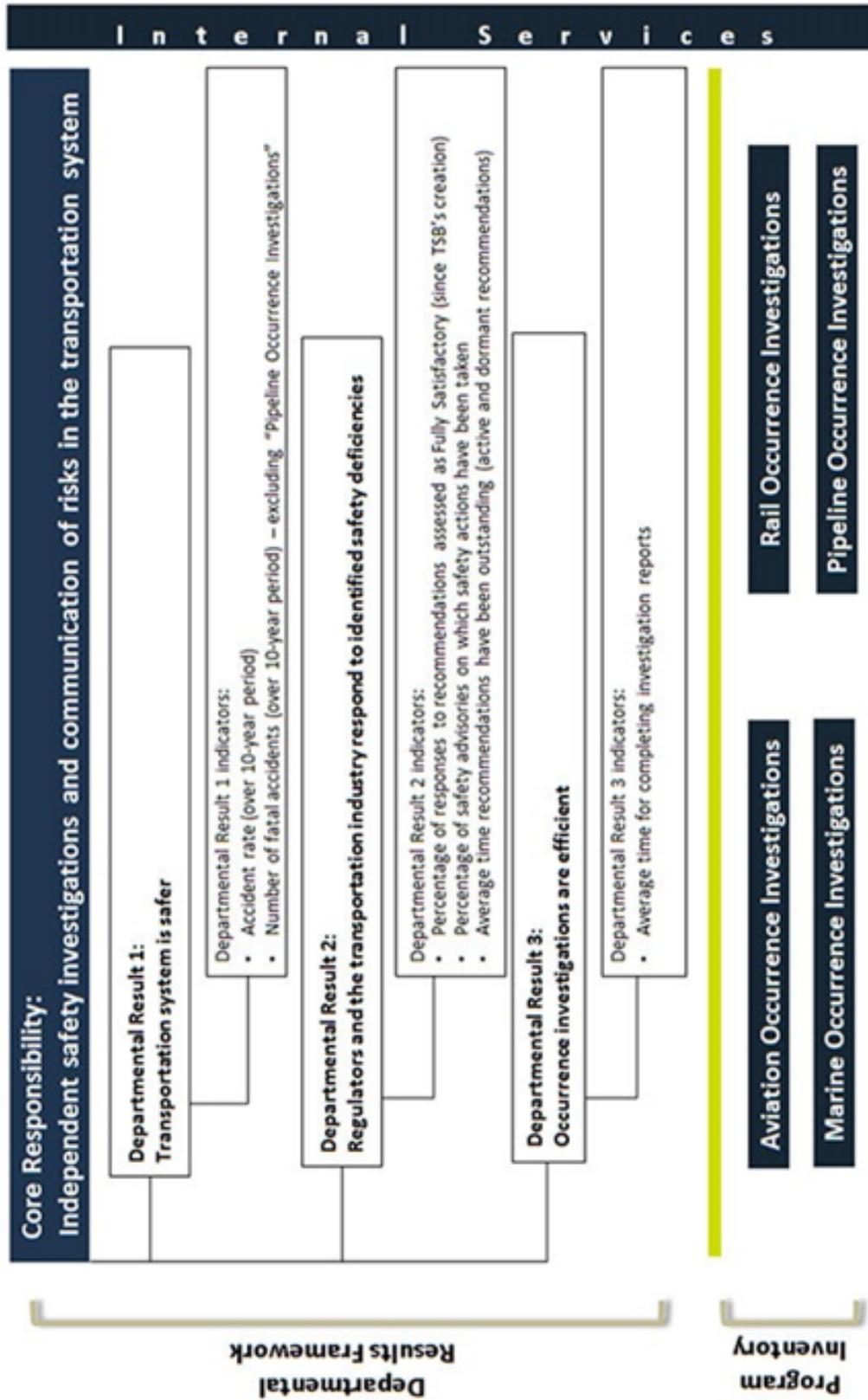
Operating context

Information on the operating context is available on [TSB's website](#).^{xi}

Reporting framework

The TSB's Departmental Results Framework and Program Inventory of record for 2021–22 are shown as follows.

Departmental Results Framework



Supporting information on the program inventory

Financial, human resources and performance information for the TSB's Program Inventory is available in [GC InfoBase](#).^{xii}

Supplementary information tables

The following supplementary information tables are available on the TSB's website:

- ▶ [Departmental Sustainable Development Strategy/Reporting on Green Procurement](#)^{xiii}
- ▶ [Gender-based analysis plus](#)^{xiv}

Federal tax expenditures

The tax system can be used to achieve public policy objectives through the application of special measures such as low tax rates, exemptions, deductions, deferrals and credits. The Department of Finance Canada publishes cost estimates and projections for these measures each year in the [Report on Federal Tax Expenditures](#).^{xv} This report also provides detailed background information on tax expenditures, including descriptions, objectives, historical information and references to related federal spending programs as well as evaluations and GBA Plus of tax expenditures.

Organizational contact information

Mailing address:

Transportation Safety Board of Canada
Place du Centre, 4th floor
200 Promenade du Portage
Gatineau, Quebec K1A 1K8

Telephone: 1-800-387-3557

Email: communications@bst-tsb.gc.ca^{xvi}

Website: www.tsb.gc.ca^{xvii}

Appendix: definitions

appropriation (*crédit*)

Any authority of Parliament to pay money out of the Consolidated Revenue Fund.

budgetary expenditures (*dépenses budgétaires*)

Operating and capital expenditures; transfer payments to other levels of government, organizations or individuals; and payments to Crown corporations.

core responsibility (*responsabilité essentielle*)

An enduring function or role performed by a department. The intentions of the department with respect to a core responsibility are reflected in one or more related departmental results that the department seeks to contribute to or influence.

Departmental Plan (*plan ministériel*)

A report on the plans and expected performance of an appropriated department over a 3-year period. Departmental Plans are usually tabled in Parliament each spring.

departmental priority (*priorité*)

A plan or project that a department has chosen to focus and report on during the planning period. Priorities represent the things that are most important or what must be done first to support the achievement of the desired departmental results.

departmental result (*résultat ministériel*)

A consequence or outcome that a department seeks to achieve. A departmental result is often outside departments' immediate control, but it should be influenced by program-level outcomes.

departmental result indicator (*indicateur de résultat ministériel*)

A quantitative measure of progress on a departmental result.

departmental results framework (*cadre ministériel des résultats*)

A framework that connects the department's core responsibilities to its departmental results and departmental result indicators.

Departmental Results Report (*rapport sur les résultats ministériels*)

A report on a department's actual accomplishments against the plans, priorities and expected results set out in the corresponding Departmental Plan.

experimentation (*expérimentation*)

The conducting of activities that seek to first explore, then test and compare the effects and impacts of policies and interventions in order to inform evidence-based decision-making, and improve outcomes for Canadians, by learning what works, for whom and in what circumstances. Experimentation is related to, but distinct from innovation (the trying of new things), because it involves a rigorous comparison of results. For example, using a new website to communicate with Canadians can be an innovation; systematically testing the new website against existing outreach tools or an old website to see which one leads to more engagement, is experimentation.

full-time equivalent (*équivalent temps plein*)

A measure of the extent to which an employee represents a full person-year charge against a departmental budget. For a particular position, the full-time equivalent figure is the ratio of number of hours the person actually works divided by the standard number of hours set out in the person’s collective agreement.

gender-based analysis plus (GBA Plus) (*analyse comparative entre les sexes plus [ACS Plus]*)

An analytical tool used to support the development of responsive and inclusive policies, programs and other initiatives; and understand how factors such as sex, race, national and ethnic origin, Indigenous origin or identity, age, sexual orientation, socio-economic conditions, geography, culture and disability, impact experiences and outcomes, and can affect access to and experience of government programs.

government-wide priorities (*priorités pangouvernementales*)

For the purpose of the 2021–22 Departmental Results Report, government-wide priorities refers to those high-level themes outlining the government’s agenda in the 2020 Speech from the Throne, namely: Protecting Canadians from COVID-19; Helping Canadians through the pandemic; Building back better – a resiliency agenda for the middle class; The Canada we’re fighting for.

horizontal initiative (*initiative horizontale*)

An initiative where two or more federal organizations are given funding to pursue a shared outcome, often linked to a government priority.

non-budgetary expenditures (*dépenses non budgétaires*)

Net outlays and receipts related to loans, investments and advances, which change the composition of the financial assets of the Government of Canada.

performance (*rendement*)

What an organization did with its resources to achieve its results, how well those results compare to what the organization intended to achieve, and how well lessons learned have been identified.

performance indicator (*indicateur de rendement*)

A qualitative or quantitative means of measuring an output or outcome, with the intention of gauging the performance of an organization, program, policy or initiative respecting expected results.

performance reporting (*production de rapports sur le rendement*)

The process of communicating evidence-based performance information. Performance reporting supports decision making, accountability and transparency.

plan (*plan*)

The articulation of strategic choices, which provides information on how an organization intends to achieve its priorities and associated results. Generally, a plan will explain the logic behind the strategies chosen and tend to focus on actions that lead to the expected result.

planned spending (*dépenses prévues*)

For Departmental Plans and Departmental Results Reports, planned spending refers to those amounts presented in Main Estimates.

A department is expected to be aware of the authorities that it has sought and received. The determination of planned spending is a departmental responsibility, and departments must be able to defend the expenditure and accrual numbers presented in their Departmental Plans and Departmental Results Reports.

program (*programme*)

Individual or groups of services, activities or combinations thereof that are managed together within the department and focus on a specific set of outputs, outcomes or service levels.

program inventory (*répertoire des programmes*)

Identifies all the department's programs and describes how resources are organized to contribute to the department's core responsibilities and results.

result (*résultat*)

A consequence attributed, in part, to an organization, policy, program or initiative. Results are not within the control of a single organization, policy, program or initiative; instead they are within the area of the organization's influence.

statutory expenditures (*dépenses législatives*)

Expenditures that Parliament has approved through legislation other than appropriation acts. The legislation sets out the purpose of the expenditures and the terms and conditions under which they may be made.

target (*cible*)

A measurable performance or success level that an organization, program or initiative plans to achieve within a specified time period. Targets can be either quantitative or qualitative.

voted expenditures (*dépenses votées*)

Expenditures that Parliament approves annually through an appropriation act. The vote wording becomes the governing conditions under which these expenditures may be made.

Endnotes

- i GC InfoBase, <https://www.tbs-sct.gc.ca/ems-sgd/edb-bdd/index-eng.html#start>
- ii GC InfoBase, <https://www.tbs-sct.gc.ca/ems-sgd/edb-bdd/index-eng.html#start>
- iii GC InfoBase, <https://www.tbs-sct.gc.ca/ems-sgd/edb-bdd/index-eng.html#start>
- iv Public Accounts of Canada, <http://www.tpsgc-pwgsc.gc.ca/recgen/cpc-pac/index-eng.html>
- v GC InfoBase, <https://www.tbs-sct.gc.ca/ems-sgd/edb-bdd/index-eng.html#start>
- vi Financial statements (unaudited) for the year ended March 31, 2022, <https://www.tsb.gc.ca/eng/publications/rmr-dpr/2022/efp-ffs-2022.html>
- vii Future-Oriented Statement of Operations, <https://www.tsb.gc.ca/eng/publications/priorites-priorities/2021/erp-fso.html>
- viii TSB Future-Oriented Statement of Operations and Notes 2021–22, <https://www.tsb.gc.ca/eng/publications/priorites-priorities/2021/erp-fso.html>
- ix Canadian Transportation Accident Investigation and Safety Board Act, S.C. 1989, c. 3, <http://laws-lois.justice.gc.ca/eng/acts/C-23.4/index.html>
- x TSB Raison d'être, mandate and role, <http://www.tsb.gc.ca/eng/publications/priorites-priorities/2021/rm-ci.html>
- xi TSB operating context, <http://www.tsb.gc.ca/eng/qui-about/index.html>
- xii GC InfoBase, <https://www.tbs-sct.gc.ca/ems-sgd/edb-bdd/index-eng.html#start>
- xiii Departmental Sustainable Development Strategy/Reporting on Green Procurement, <http://www.tsb.gc.ca/eng/publications/rmr-dpr/2022/smdd-dsds-2022.html>
- xiv Gender-based analysis plus, <http://www.tsb.gc.ca/eng/publications/rmr-dpr/2022/GBAst-2022.html>
- xv Report on Federal Tax Expenditures, <https://www.canada.ca/en/department-finance/services/publications/federal-tax-expenditures.html>
- xvi TSB email address, communications@tsb.gc.ca
- xvii TSB website, <https://tsb.gc.ca/eng/index.html>