



INDICATORS FOR MEASURING OVERSIGHT EFFECTIVENESS IN RAIL SAFETY

July 20, 2023

Introduction

Transport Canada (TC) is committed to advancing the safety and security of the rail industry, including the public, rail industry personnel, property, and the environment. As per its mandate, TC is responsible for the rail safety regulatory framework and overseeing the administration and compliance of regulations, rules, and standards. TC conducts approximately 40,000 rail safety oversight activities each year, including inspections and audits.

TC's Rail Safety program undertakes an annual risk-based business planning cycle. This process defines national and regional priorities and the number of planned inspections for each functional area. Issues are identified based on key data inputs such as Transportation Safety Board (TSB) occurrence data, inspection and audit data, complaints and inquiries, and Transportation Information Regulations submissions. Oversight activities are planned in accordance with emerging issues, risks, and trends.

In its 2021 follow-up audit of Rail Safety, the Office of the Auditor General (OAG) recommended that TC assess the extent to which its inspections and audits have improved compliance by the railway companies with regulations that mitigate key safety risks.

In response to the findings of the 2021 audit and to inform next steps, TC's Evaluation and Advisory Services conducted an Evaluation of Rail Safety Oversight Activities in 2021-22. The evaluation sought to assess the extent to which oversight by TC's Rail Safety program has improved compliance and safety. While the evaluation identified areas by which TC's oversight contributed to compliance and safety, it was noted that, "attributing and quantifying what portion of the outcome of compliance is due to Transport Canada oversight is a near impossible undertaking, and even more so when it comes to safety." That said, the evaluation did include quantitative analyses that the Rail Safety program could leverage and build on to better demonstrate the impact of its oversight. As a key first step, the evaluation recommended that TC should internally define "oversight effectiveness" and the ways by which its oversight activities contribute to this.

In response to this recommendation, the Rail Safety program advanced a series of actions with the goal of implementing and measuring oversight effectiveness indicators by April 2024.

Actions to Date

The following is a summary of actions to date.

1. A definition of Rail Safety oversight effectiveness was developed. The following definition will be used: "Rail Safety oversight can be considered effective when it reduces harm and risk through the promotion and enforcement of compliance with Transport Canada's requirements governing safety and security, allowing Canadians to access a safe and secure transportation system."

2. A framework designed to evaluate the effectiveness of Rail Safety oversight was created. This includes defining metrics, or performance indicators, by which to measure the impact of Rail Safety activities on overall industry compliance and safety. This framework qualifies the effectiveness of oversight through the utilization of an integrated framework of indicators, which includes:

- a) Core outcome indicators to evaluate TC's capacity to meet oversight program objectives from the largest scope possible, focusing on aggregate measures of changes in rail safety parameters. Monitoring aggregate measures will provide a broad understanding of the impact of TC's actions on Rail Safety and compliance in the industry. An example of a core outcome indicator is the percentage of random planned inspections delivered in full compliance;
- b) Targeted outcome indicators to evaluate effectiveness by analyzing the impact of individual rules, regulations, and oversight measures. Through concerted effort to control external variables, the goal is to represent the impact of individual regulatory measures, to the closest degree possible. An example of a targeted outcome indicator is the monitoring of compliance and fire incident rates as they pertain to the rollout of the Railway Extreme Heat and Fire Risk Mitigation Rules (2022);
- c) Process indicators to evaluate oversight activity outputs. This set of indicators evaluates the effectiveness of the processes underlying the activities of oversight. An example of a process indicator is the percentage of random planned inspections delivered; and,
- d) Risk-based indicators to evaluate the oversight planning and effectiveness of TC's Rail Safety risk-based business planning procedures. These indicators are to be developed annually depending upon the risks identified and responded to in the risk-based business planning procedures.

Once fully implemented, this performance measurement framework will provide TC with additional means to assess the effectiveness of its Rail Safety oversight program. It will improve and complement the existing performance measurement framework currently in place.

Next Steps

TC will continue to progress and finalize the suite of effectiveness indicators. It will be used to inform the risk-based business planning cycle for the upcoming fiscal year (2024-25).

There will be a continuous feedback loop to ensure insights and lessons learned from implementation of this new approach are incorporated into the performance measurement approach going forward.