

## SMS Best Practice Submission

ANSP	NAV CANADA	Date of submission	August 2022
Contact Details	Email: Heather.Henderson@navcanada.ca	Tel: 1-613-222-0397	
SoE Study Area	2.1 Safety Policy 6.2 Safety Risk Management		
Best Practice Title	Risk and Opportunity Based Corporate Safety Plan		
In use since	2018		
ANSPs using this practice	None		
<p>The Corporate Safety Plan has been a foundation for NAV CANADA's improvements in safety for over two decades. It provided the impetus for numerous improvements to operational safety, from the implementation of the Safety Management System (SMS) through to the Normal Operations Safety Survey, and the ongoing development of the NAV CANADA Safety Information System. These activities have led to the mature SMS that NAV CANADA has today, with well defined and understood processes for the management of operational risks to a level as low as reasonably practicable.</p> <p>Over the years, the Corporate Safety Plan itself has remained consistent in concept; however, it focussed more on SMS issues and opportunities for improvement than operational issues which were addressed in other planning documents and processes. At the end of fiscal year 2016 with many Safety Plan goals scheduled to close, an opportunity arose to review the focus of the Plan to ensure the best support for the Company's intended direction. During fiscal years 2017 and 2018, NAV CANADA set out to modernize the Corporate Safety Plan and the reporting on its achievement.</p> <p>The results of this modernization effort were reflected in the FY2019 Corporate Safety Plan (produced in 2018). The effort resulted in the following enhancements:</p> <ul style="list-style-type: none"> <li>• Includes activities to address the Company's top operational safety risks (eight in 2019 and 2020 Safety Plans; 9 in the 2021 Safety Plan (seven in 2021 Safety Plan) as well as implement SMS opportunities.</li> <li>• Expressly demonstrates the link to corporate strategy, enterprise risk management, and other corporate processes.</li> <li>• Has multi-year goals supported by annual initiatives relatable to operational, day-to-day activities.</li> <li>• Has goal-driven measures including outcome measures (e.g., 75% of employees are aware of the top risks, reduction in fatigue risk metrics as compared to FY2019 Baseline, 75% of Safety Culture program measures have achieved target levels, etc.) as opposed to just transactional measures (e.g. project completed, system implemented, etc.).</li> <li>• A targeted product for senior management and the Board of Directors; clearly capturing risks, SMS opportunities, multi-year goal measures, targets and annual initiatives, measures and targets.</li> <li>• Structured quarterly reporting including full mid-cycle review with Goal Sponsors to make necessary course corrections and plan adjustments, and a year end report clearly demonstrating achievement against the plan.</li> <li>• A separate "face of safety" companion document, "Navigating Safety" targeted to all employees to key information.</li> </ul> <p>The Safety Plan is the mechanism by which NAV CANADA fulfils its regulatory requirement to set, monitor and report on safety objectives and goals. It is prepared annually, and now contains:</p> <ul style="list-style-type: none"> <li>• The safety goals that identify long-term (multi-year) improvements in safety performance to be achieved in a specific time; and</li> <li>• An action plan for the respective fiscal year, to support achievement of those safety goals.</li> </ul> <p>The Safety Plan is prepared for each NAV CANADA fiscal year (September-August), and the safety planning process is coordinated and aligned with the timing and structure of other enterprise-wide processes such as corporate strategic planning, and enterprise risk management.</p>			

NAV CANADA's Safety Plan is organized into three main sections:

- Top Operational Safety Risks;
- SMS Opportunities; and
- Closed /Monitored Goals.

The top operational safety risks are determined every two years by the Safety Risk Assessment (SRA) process that involves, among other things, significant input from operational personnel across the country. In the opposite year a full review with senior management is completed. Risk targets are set through the same SRA process, by the executive level risk owners.

These top operational safety risks remain in the Safety Plan until such time as the risk score reaches its target level, or if management deems it to be an ongoing risk requiring continued mitigation efforts (e.g., Cyber Security). The SMS opportunities are identified through a variety of inputs including but not limited to the National Safety Trend Analysis, the SMS Management Review, and the CANSO SMS Standard of Excellence Maturity Assessment benchmarking exercise. Both the operational safety risks and the SMS opportunities must be related to one or more safety objectives (as documented in the corporate safety policy).

For each top operational safety risk and each SMS opportunity, long term (multi-year) goals are identified, and a goal statement supported by a short narrative describing the goal is documented. Goals related to the top operational safety risks are set to reduce these risks to a level as low as reasonably practicable. Goals related to SMS opportunities are meant to improve operational safety and the Company's Safety Management System. Each goal has a senior management level goal sponsor who identifies goal measures and targets. Once the goals and their associated measures and targets have been endorsed by the Executive Management Committee, and approved by the Board of Directors' Safety Committee, the action plan for the fiscal year is developed. The action plan contains the initiatives (projects or activities) required to achieve the goal. Each initiative is prioritized (high, medium, low), and also has measures with targets.

Goal and Initiative measures are set to assist in determining whether success has been achieved. They can be either output or outcome based (a combination of both is preferred) and can use leading and/or lagging indicators. If only one measure is listed for a Goal, it must be indicative of the expected outcome. For example, for a goal related to mitigating the risk of runway incursions, the rate of runway incursions (with a targeted reduction from a baseline) is preferred to the number meetings with stakeholders took place regarding runway incursions, because the meetings may or may not mitigate the risk.

As part of the evolution of the safety planning process, in 2022 a pilot project was conducted to better align risk drivers with goals and goal measures. For two of the company's top operational safety risks, a detailed review of the risk profiles was conducted to gain a more in-depth of the risk drivers and the risk mitigations necessary to address them. Demonstrating a clear link between the risks, the risk drivers, and the desired outcomes allows for the tracking of improvements over time and/or prompts to challenge the effectiveness of planned activities. The piloted methodology resulted in outcome measures that can demonstrate the impact of safety plan goals and initiatives on the top safety risks were included in the FY23 Safety Plan. The methodology will be applied to additional safety risks and incorporated into safety plans going forward.

The Safety Plan is updated to include the action plan, as well as any amendments reflective of a change in environment or new information, and is endorsed by the Executive Management Committee, and approved by the Board of Directors' Safety Committee. It is then published in both official languages and disseminated electronically to all staff.

Success of the Safety Plan is measured by a weighted completion rate of the percentage of Initiatives (by priority) considered "completed / achieved" at year-end as assessed against the initiative's measures. An initiative is marked as completed / achieved, when all initiative measures have been achieved per the target. The Safety Plan is considered successfully completed if a weighted completion of 90% is achieved and approved by the Board of Directors Safety Committee. The Vice-President Safety and Quality provides a year-end opinion regarding the achievement of the Safety Plan; however, it is the Board of Directors' Safety Committee that makes the final determination.

Quarterly reports on the Safety Plan are prepared and sent to the Executive Management Team as well as the Board of Directors' Safety Committee. These reports contain at minimum:

- the completion status of the Plan at the end of the quarter (YTD), as well as a forecast at fiscal year-end;
- a summary of initiatives completed during the quarter including (where possible) their impact on safety;
- identification of any issues / challenges realized during the quarter or expected to be encountered prior to fiscal year-end (heads-up); and
- requests for changes to the Safety Plan resulting from significant or exceptional changes to circumstances typically outside of Management's control.

These quarterly reports are prepared with input from Initiative Owners and Goal Sponsors, and evidence of completion / achievement of initiative measures is verified by NAV CANADA's Safety and Quality Department.

As part of the Q2 reporting process, a meeting with all Goal Sponsors is held to review the Q2 status as well as the year-end forecast. This meeting is particularly important when the internal and/or external environment changes suddenly, as the impacts on the achievement of the Safety Plan will need to be discussed with the Board of Directors Safety Committee.

Mid-way through Q4, initiative OPIs are asked to update their year-end forecasts so that executive management can receive early indication of whether or not the completion target will be met; and can allocate additional resources (if available) to complete those initiatives at risk of not being completed.

As part of the Q4 reporting process, a detailed report providing a summary of the Plan including changes made throughout; year-end status of goal and initiative measures; year-end status of achievement against the overall weighted completion; detailed initiative tracking sheet for each quarter; detailed narrative on each and any initiative assessed as incomplete or not achieved; and recommendations for variances as necessary against measures or targets.

Lastly, *Navigating Safety*, is prepared and published in both official languages, and disseminated to all employees as well as the Regulator. It is the mechanism used to close the feedback loop and includes the contents of the current year Safety Plan, and highlights of achievement from the previous year's Plan.

In the last year, the following enhancements have been made to the Corporate Safety Plan development and reporting:

- The Safety Plan template was updated to enhance readability.
- Guidelines were developed to provide Safety Plan contributors with a handbook of tools and methods, and to improve consistency in the identification and reporting on goals, initiatives and measures.
- The quarterly reporting database was updated to allow for multi-year data input and trend analysis.
- A new PowerBI report was developed to provide high level summary information for the executive, and detailed information to the planning team for analysis.

An example of a goal and associated initiative is provided below.

## GOAL OSR 7.2 Improve stakeholder retrieval of NOTAM

**NEW!**

**GOAL SPONSOR:** Vanessa Robertson / Simon Robert

**GOAL DESCRIPTION:** A root cause of the risk of missing critical information due to the volume and/or quality of NOTAMs is the ability to effectively retrieve and assess the NOTAMs relevant to a specific flight. The key risk drivers contributing to this root cause are filtering and sorting of NOTAMs, awareness and education regarding retrieval, and the quality of the underlying NOTAM in force. This goal will look to address each of these risk drivers.

Goal Measures	Target	Target Completion
Improve the relevancy of NOTAMs provided to users.	Reduction of percentage of irrelevant NOTAMs included in results for key test cases as measured against an FY23 baseline.	15% reduction by FY26
Correct application of business rules for NOTAM	Reduction in business rule errors over time as measured against an FY23 baseline.	50% reduction by FY26
Number of NOTAM Data Errors	Downward trend year over year against FY23 baseline	TBD

### INITIATIVE OSR 7.2.1

Develop a CONOPS for NOTAM Retrieval by NAV CANADA employees and external stakeholders who do not own and operate a flight planning system.

Being able to retrieve and sort the relevant NOTAMs for a flight is key to assuring that pilots and ATS operational staff have all the relevant information to support flight operations. To provide a tool(s) - or requirements for a tool - that offers capabilities that align with users' operational needs, a concept of operations will be developed and presented to the NOTAM Service Governance Board.

**PRIORITY:** Medium

**OPI:** Caroline Doucet

**INITIATIVE MEASURE:**

CONOPS drafted

**TARGET:** Presented to NSGB

### INITIATIVE OSR 7.2.2

Develop additional NOTAM Scenario Definition (NSD) templates in the NOTAM Entry System (NES).

Further developing the NOTAM Entry System NSD templates is a means to automate the application of the majority of NOTAM business rules, thus improving the quality of NOTAM output and improving filtering capabilities where they exist. In some cases, NSDs will reduce some of the NOTAM data errors. This initiative includes the development of the following NSDs as a priority: Trigger NOTAM and NAVAID in FY23 with others such as Airspace, terrain elevation feature for the catchall NSD to be developed in subsequent years following the NES development roadmap.

**PRIORITY:** High

**OPI:** Lee Nguyen

**INITIATIVE MEASURE:**

NSDs implemented

**TARGET:** As per the NES roadmap

**By submitting this document, your organisation is willing for the proposed Optimised or Good Practice to be shared with other ANSPs.**

For Optimised Practices, this document should be sent together with the SoE in SMS questionnaire, to: [soe\\_2021@eurocontrol.int](mailto:soe_2021@eurocontrol.int) **by 31<sup>st</sup> July 2021 at the latest.**

Submissions for consideration as Good Practices may be sent by the above date. They may also be identified during the survey interview sessions with the survey team, following which a Good Practice submission document will be requested.