Hudson Bay ADS-B

The Challenge:
In the remote Hudson Bay area, due to the lack of radar coverage, aircraft had to fly using procedural separation rules that kept them 10 minutes apart, translating into roughly 80 nautical miles of separation. This level of separation leads to excessive fuel-burn and less efficient operations. To maximize safety and efficiency, NAV CANADA needed an alternative, innovative radar solution that would also lay the groundwork for future surveillance across the country.

Saab Sensis Corporation Solutions at Work:
To support NAV CANADA's strategy of using new technology to bring significant safety and efficiency benefits to its customers, Saab Sensis Corporation supplied Automatic Dependent Surveillance – Broadcast (ADS-B) to the Hudson Bay region. Saab Sensis ADS-B provides surveillance of the 250,000 square nautical miles of airspace over Hudson Bay where there was previously no air traffic surveillance coverage.

The installation of Saab Sensis ADS-B in the Hudson Bay region launches the country's nationwide deployment of next-generation air traffic surveillance.

The Saab Sensis ADS-B 1090 ground-based transceivers provide aircraft position information with sufficient accuracy and reliability to allow for five nautical miles of lateral separation. The ADS-B deployment will help airlines reduce fuel-burn and emissions. In the Hudson Bay airspace alone, once all aircraft are equipped with the proper avionics, the surveillance system will save almost 5 million gallons of fuel a year and about 50,000 tons of CO2 emissions. At today's fuel costs, that equates to over $10 million in annual savings. Additionally, once equipped, the 35,000 flights per year that travel through this airspace will be able to follow the most efficient flight routes, climb to optimal altitudes more quickly, and have a greater situational awareness of other aircraft around them.

AT A GLANCE:
• Improved separation standards
• Accurate surveillance for non-radar airspace
• Update rate: 5 seconds
• Coverage: 250,000 sq. nm.
**FEATURE:**

- Improved separation standards
- Situational awareness for pilots
- Lightweight, low-cost, easy to install unit

**BENEFIT:**

- Fuel savings from more efficient operations
- Increased capacity, and safety
- Surveillance option for non-radar airspace and remote locations

**Saab Sensis Corporation:**

Saab Sensis is the leader in ADS-B surveillance. Saab Sensis pioneered the development and implementation of ADS-B, fielding the industry’s first operational ADS-B transceivers for both the Mode S Extended Squitter (1090 ES) and UAT datalinks. In addition to Hudson Bay, and the East Coast of Canada, Saab Sensis ADS-B was selected for China, for the United States in Oregon and Colorado and for the Norwegian part of the North Sea.

![Hudson Bay ADS-B Coverage Area](image-url)