



AN- CONF/14

14th Air Navigation Conference

26 August to 6 September 2024 | Montréal, Canada



True North Advisory Group (True-AG)

Christine Madden

Technical Officer, Operational Safety
Secretary True-AG

True-AG: Overview

Why Study True North?

Affects of a Moving Magnetic North

ICAO Survey

World Magnetic Model

Who We Are

Expertise

States: Global Locations by ICAO Regions

International Organizations and Industry

What We Are Doing

Terms of Reference; Scope and Tasks

When We Are Doing It

Commencement of the True-AG

Meeting Cadence (three years)

WHY

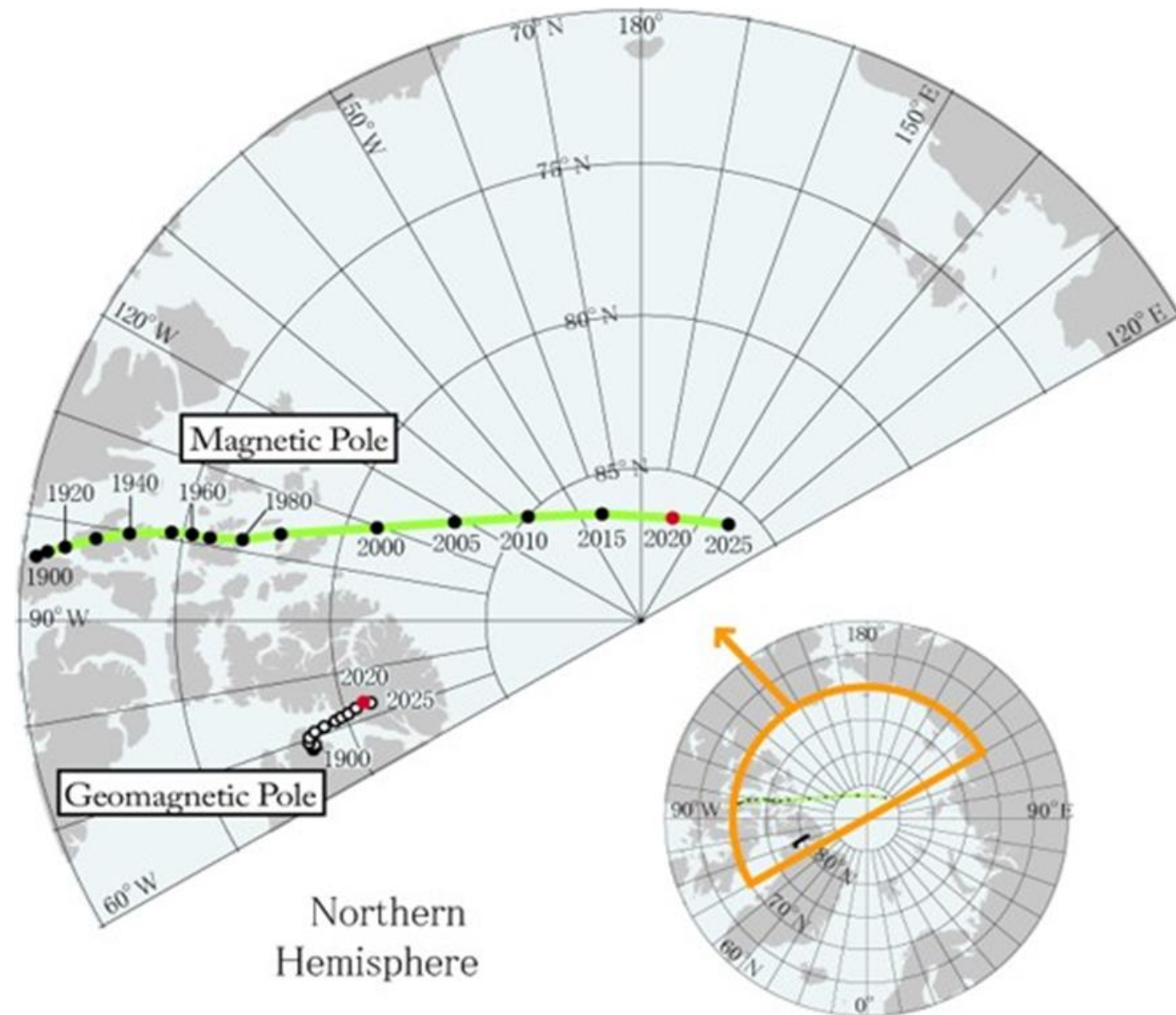
Why Study Converting Aviation Navigation from Magnetic North to True North?

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Maintaining magnetic variation tables, procedures, charts and runways has become a safety issue and is resource intensive due to magnetic north moving at eastwardly with increasing speed, requiring more frequent updates.

A resource-heavy activity involving people, money, and time, results in scarce resources unable to be used in other competing capacities.

The cost of updating inaccurate charts and navigational aids results in budget overruns, for stakeholders, globally.



ICAO Survey

Background, objectives and methodology

Background

- Canada presented a WP at AN-Conf/12 (Nov 2012) and AN-Conf/13 (Oct 2018) and an IP at the HLCC (Oct 2021), to discuss the topic of moving to a true north reference system in air operations.
- At IFPP/15 (March 2022), Canada also presented a WP to the Panel to consider a global switch to true north. The Panel supported the initiative but requested ICAO carry out a survey to investigate the level of support of States and industry for such a proposal.

Objectives

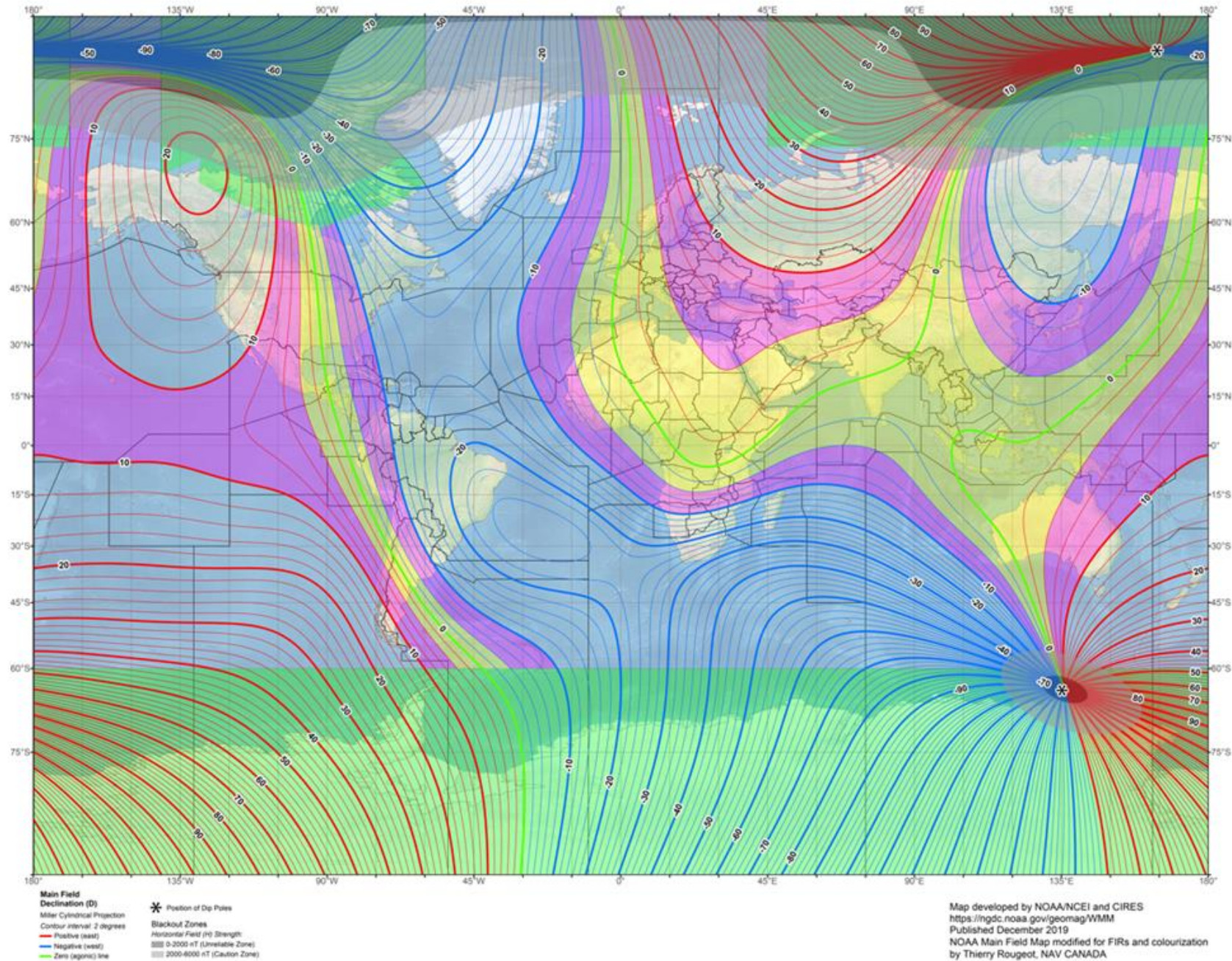
- Determine the level of support of States and their aviation industry for ICAO to work on moving to true north.
- Identify any concerns or challenges to be addressed.
- Findings of the survey may be used to aid ICAO in developing any plans and strategies for true north.

Methodology

- Survey was conducted online using Microsoft Forms.
- 8-10 questions for each stakeholder.
- The survey link was sent by State Letter (SL AN11/57-22/87) on September 2022.
- Two ICAO webinars were conducted to further inform States and industry.

US/UK World Magnetic Model - Epoch 2020.0 Main Field Declination (D)

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Yellow = $\pm 4^\circ$

Magenta = $\pm 10^\circ$

Green = True Today

Purple = 10° - 20° +

WHO

ICAO ANC Terms of Reference: Expertise

Multi-disciplinary group of experts from States, international organizations and industry, including but not limited to:

- Air navigation service, regulatory and policy
- Economic and analytical
- Manufacturers
- Engineers
- Operators
- Pilots
- Aeronautical charting
- Air traffic control
- Instrument flight procedure designers
- Aerodromes

True-AG Membership by States

APAC:	China Japan	MID:	Saudi Arabia United Arab Emirates
ESAF:	Rwanda South Africa	NACC:	Canada United States of America
EUR-NAT:	France Germany Norway Russian Federation Spain United Kingdom	SAM:	Brazil Chile
		WACAF:	Nigeria

True-AG by Organizations and Industry Membership

ICAO International Organizations (IO)

ACI - Airports Council International

ARINC - Aeronautical Radio, Incorporated

CANSO - Civil Air Navigation Services Organisation

EASA - European Union Aviation Safety Agency

Eurocontrol - European Organisation for the Safety of Air Navigation

IAIN - International Association of Institutes of Navigation

IAOPA - International Council of Aircraft Owner and Pilot Associations

IATA - International Air Transport Association

ICCAIA - International Coordinating Council of Aerospace Industries Associations

IFALPA - International Federation of Air Line Pilots' Associations

IFATCA - International Federation of Air Traffic Controllers' Associations

Ad Hoc Industry

GAMA - General Aviation Manufacturers Association

IFPDVA - International Flight Procedure Design and Validation Association

WHAT

Scope Breakdown

Assist ICAO by
recommending if it is or
is not feasible
to transition from
magnetic to true north
for aviation navigation



Conduct in-depth studies to assess technical, operational and economic feasibility



Develop a CONOPS and transition plan



Provide strategic advice to ICAO for the AN Conf/15 (2027) and the Assembly (2028)



Present to the AN Conf/15 (2027) and the Assembly (2028) for a decision

Terms of Reference: Tasks

We Are Here

- a) Develop a CONOPS for the global implementation of True North;
- b) Conduct further studies on the impact of a True North transition on different stakeholders, based on the CONOPS, including an efficiency/cost-benefit analysis, safety assessment and SWOT analysis from available internal and external data;
- c) Present information to assist the ANC in evaluating the outcome of the TRUE-AG, including at the results of a) and b), for review and agreement by the ANC followed by validation by States and industry stakeholders;
- d) Develop a comprehensive transition plan; and
- e) Coordinate with relevant Panels, on the development of work programme items for job cards, subject to the outcome of the review in c).

WHEN

True-AG Meetings/01 and 02

The Group commenced by Virtual Meeting:

13 March 2024:

- Establish ANC direction
- Make Introductions/Team building
- Review Background
- Review Affected ICAO Annexes
- Prepare for In-Person Meeting

24 April 2024:

- Follow-up from Meeting/01



True-AG Meeting/03

06-10 May 2024, ICAO HQ, In-Person

- Introductions/Team building
- Support briefings provided by ICAO Sections
- Impact briefings provided by States, International Organizations and Industry
- Interdisciplinary breakout groups:
 - Began developing
 - Draft CONOPS
 - Draft Matrix Analysis
- Establish meeting cadence:
 - In Person: September 2024, March and September 2025, March and September 2026, and March 2027
 - Virtual: Bi-Monthly (July 2024 through January 2027)



True-AG Meetings/04a and 04b

16 and 23 July 2024 (virtual)

- Revise draft CONOPS and Matrix Analysis
- Define Global Problem Statement
- Divide into interdisciplinary groups for Technical, Operational and Economic studies
- Build timeline based on ANC Direction:
 - Make a recommendation
 - Define how-to/timeline/scale
 - Consult States, IOs and industry
 - Draft workplan
 - Issue state letter
 - Write information letter to Assembly
 - Draft a plan
 - Ask States support
 - Outreach and Communication



Thank You

