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INTERNATIONAL CIVIL AVIATION ORGANIZATION

A UN SPECIALIZED AGENCY



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ICAO Air Navigation Bureau, Operational Safety

True North Advisory Group True-AG

Purpose: Assist and provide strategic advice to ICAO

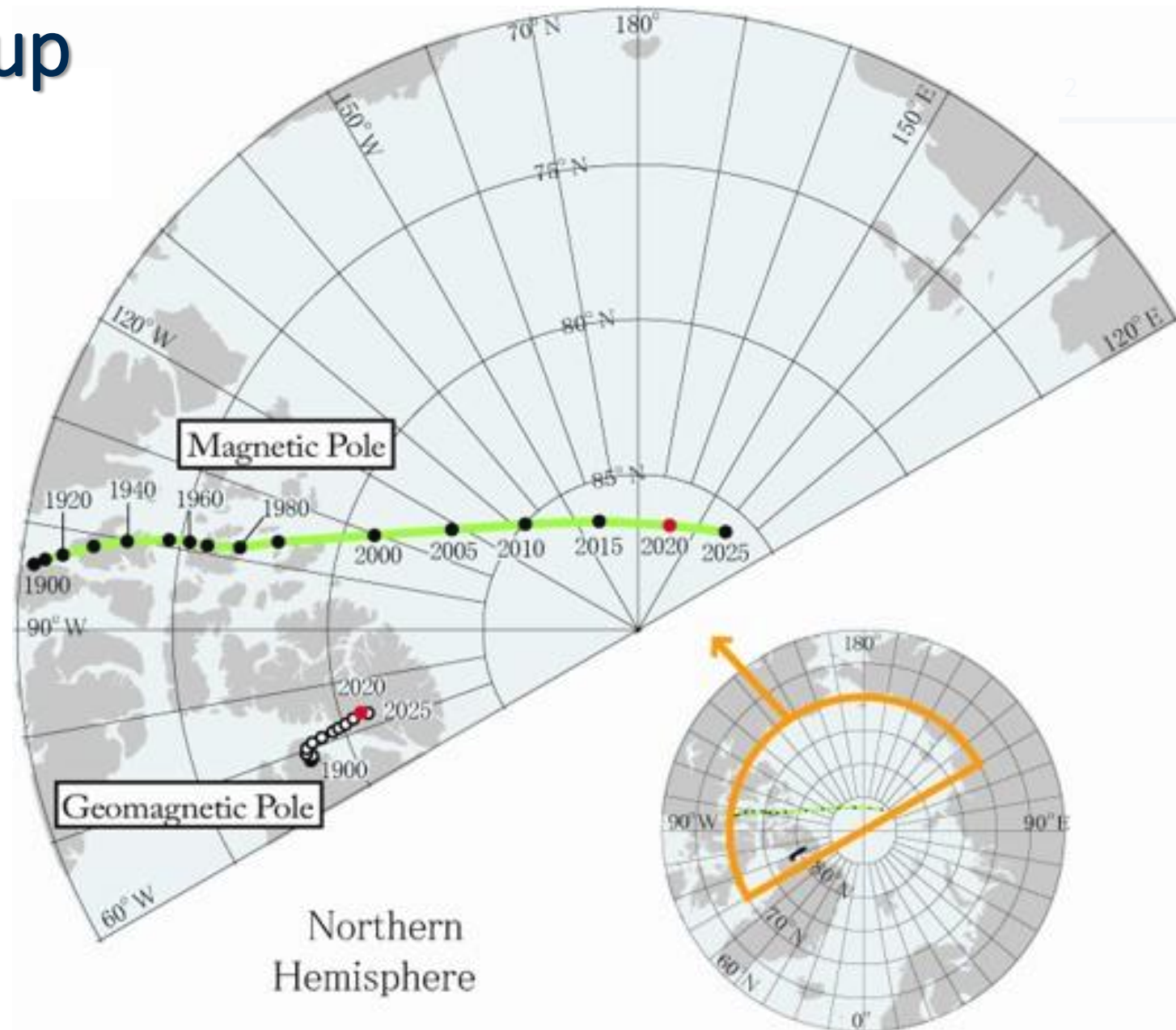
Develop a framework for a safe and efficient global transition

Conduct in-depth studies

Develop a CONOPS

Develop a transition plan

Report findings and proposed plan back to ICAO

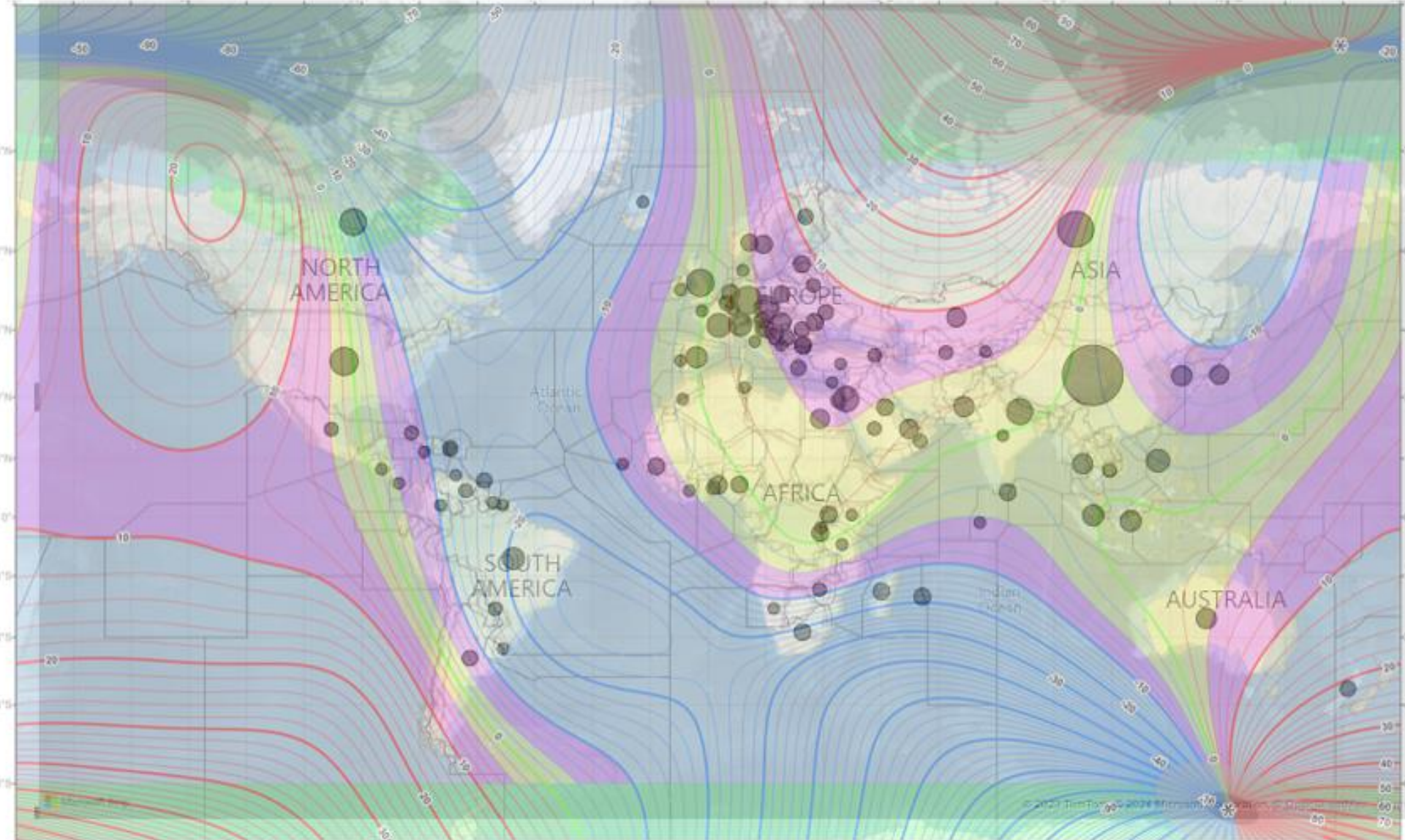


Respondents by Region

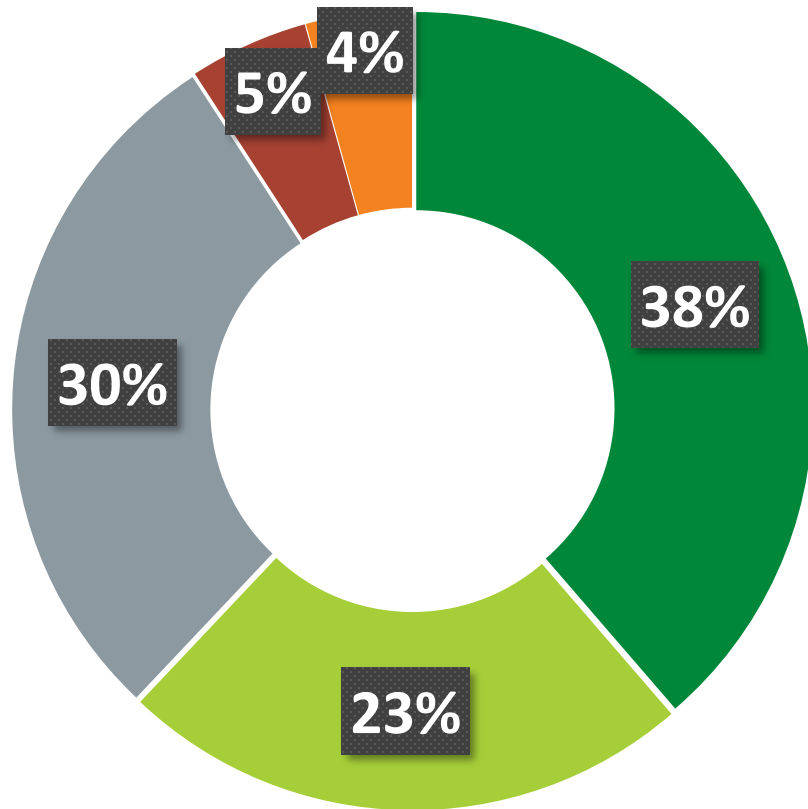
Magenta = +/- 10°
64% respondents

Yellow = +/- 4°
13% respondents

Green = Operates in True

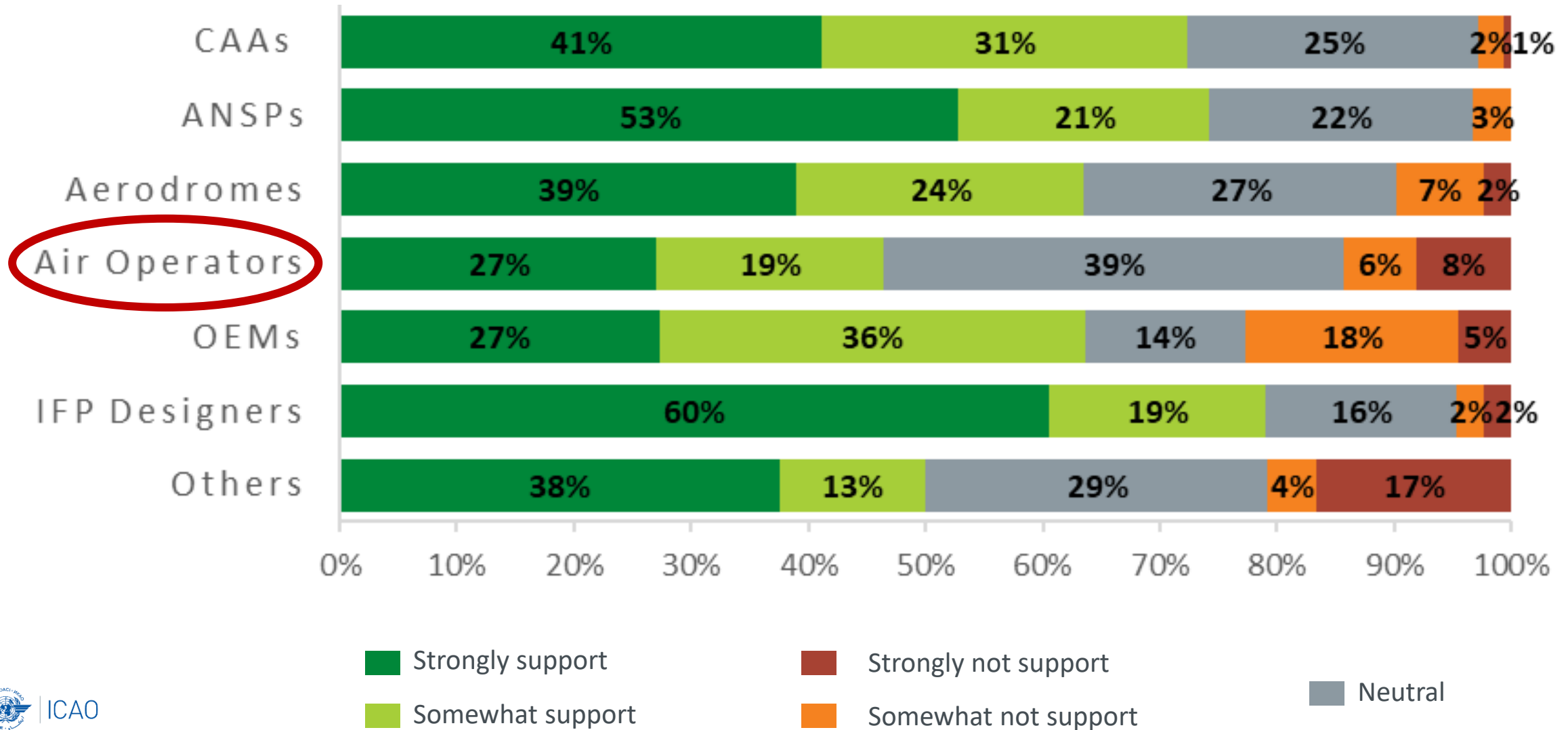


Overall Support

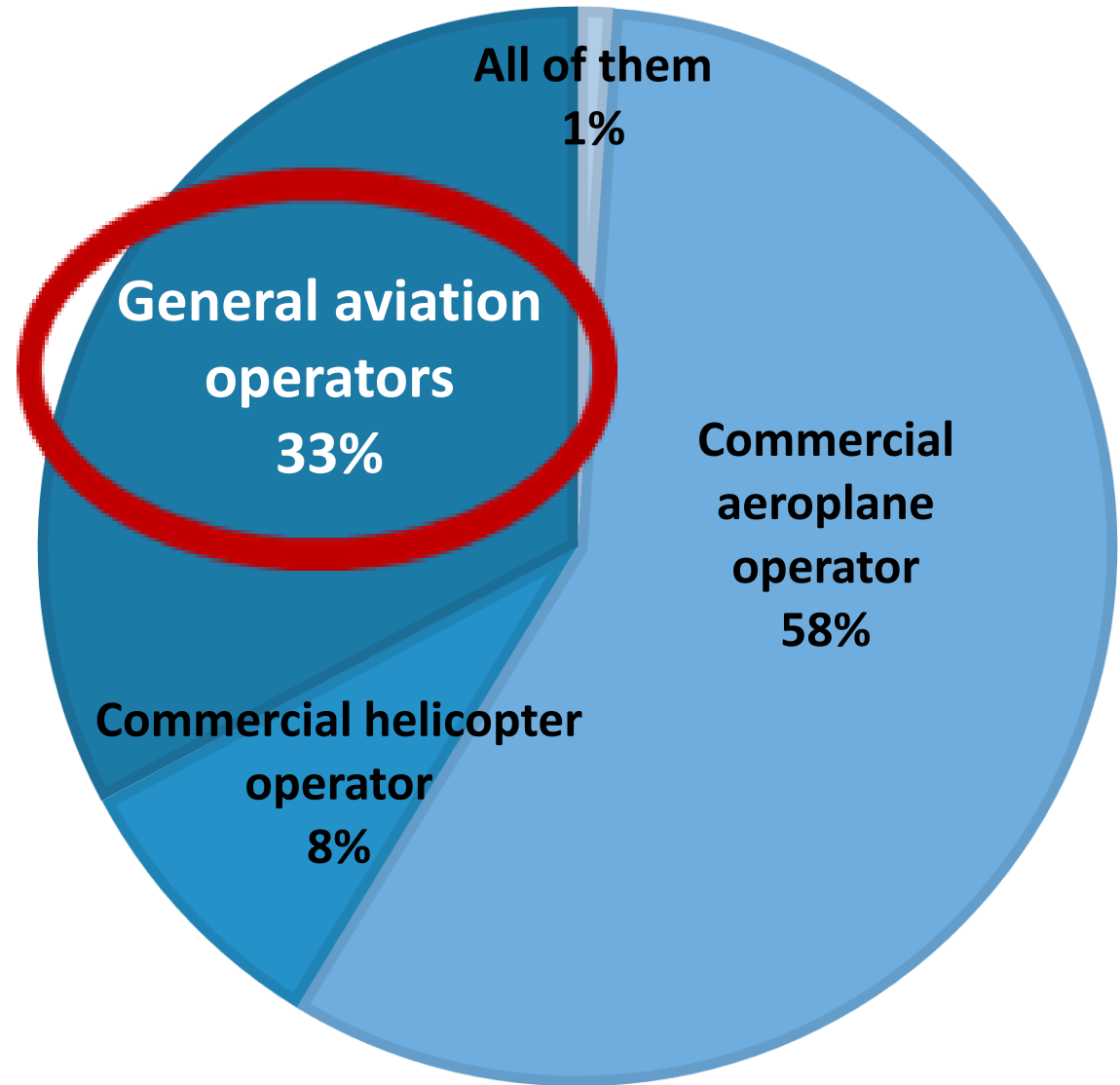


- Support = green/light green
- Not support = orange/dark orange
- Neutral = gray

Support by Stakeholder



Survey Results – Distribution within Air Operators



In regards to support, ~60% of GA operators answered neutral

Benefits Identified

- Simplified operations
- Reduced workload
- Improved accuracy
- Increased operational safety
 - Mitigate errors caused by discrepancies
 - Reduce errors during instrument approaches and auto-landing
 - Eliminate discrepancies, i.e., meteorological services reports in true north and air traffic control in magnetic north
- Eliminate ongoing maintenance and updates
 - Reduce significant aircraft downtime
 - Redirect financial and human resources on other needs

Top Foreseen Benefits by Air Operators

59% - Elimination of two systems - all weather and charting products (currently produced in TRUE) would match air operations without conversion to MAGVAR values

54% - Less cost due to elimination of periodical FMC/IRU Epoch updates

53% - Removal of data discrepancies between aircraft and air traffic systems as future ATC and Air Operations data are coupled

Challenges Identified

- A harmonized transition plan for global implementation
- Global acceptance across the stakeholders
- Cost and effort to equip aircraft, particularly older aircraft and smaller general aviation aircraft
- Potential unmanaged safety risks that may be introduced in the transition period

Top Foreseen Challenges by Air Operators

57% - Aircraft downtime related to retrofitting aircraft equipment

46% - Adjustments required to navigation equipment to adjust for MAGVAR

46% - Challenges with required equipment in non-IRU-equipped air operators

5 Key Questions Identified

1. What timeframe will be needed to transition to true north globally?
2. How will global acceptance and a harmonized transition be achieved?
3. What does a transition look like?
4. How will safety risks be identified and mitigated?
5. What is the impact on equipment and operational changes:
 - a. General aviation and small aircraft operations?
 - b. Large aircraft operations?



Timeline

2024-2026

Establish True-AG:

Kick-Off Meeting: March 13, 2024

Develop CONOPS

Conduct analyses

Design transition/implementation plan

Engage stakeholders/outreach & communication

2023

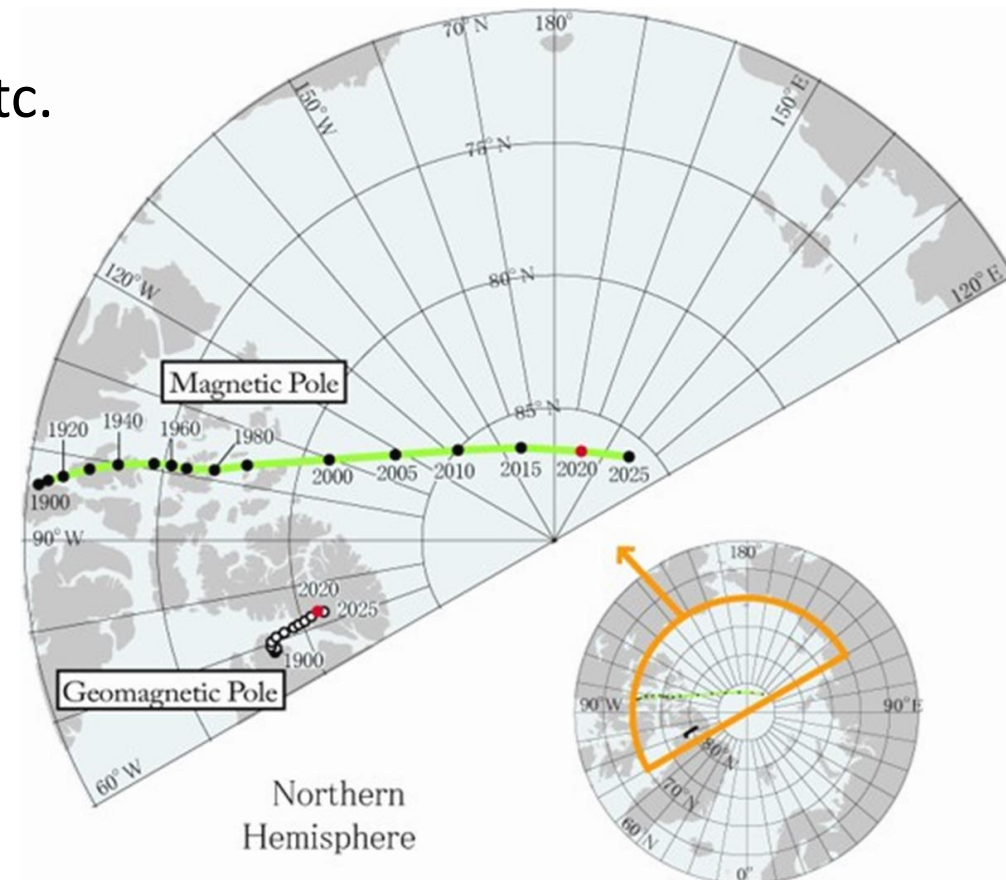
- ✓ Meet with key stakeholders
- ✓ Input from IFPP 16-2
- ✓ Brief AN-WP to ANC
- ✓ Brief Panels

2027-2028

- ❑ Provide True-AG work to the ICAO Air Navigation Conference (2027)
- ❑ Present to the ICAO Assembly (2028)

Summary

- Significant support across survey respondents, globally
 - Benefits
 - Save costs over long-term
 - Improve safety
 - Simplify operations, procedures, charts, etc.
 - Challenges
 - Identify global CONOPS
 - Coordinate transition/implementation
 - Manage change
 - Determine cost benefit
- True-AG commences March 13th, 2024



Learn More...

[NAV CANADA Switching to TRUE: Pulling away from magnetic north](#)

[NAV CANADA: Magnetic to True North, Change by 2030 - ICAO TV](#)

[Skytalk by NAV CANADA: True North - ICAO TV](#)

[Moving from Magnetic to True North in Aviation II - ICAO TV](#)

[AOPA_ Which-way-is-north_Article_May 2014](#)

[NBAA How changes in magnetic north are impacting airports_Article March 2011](#)



Thank You!