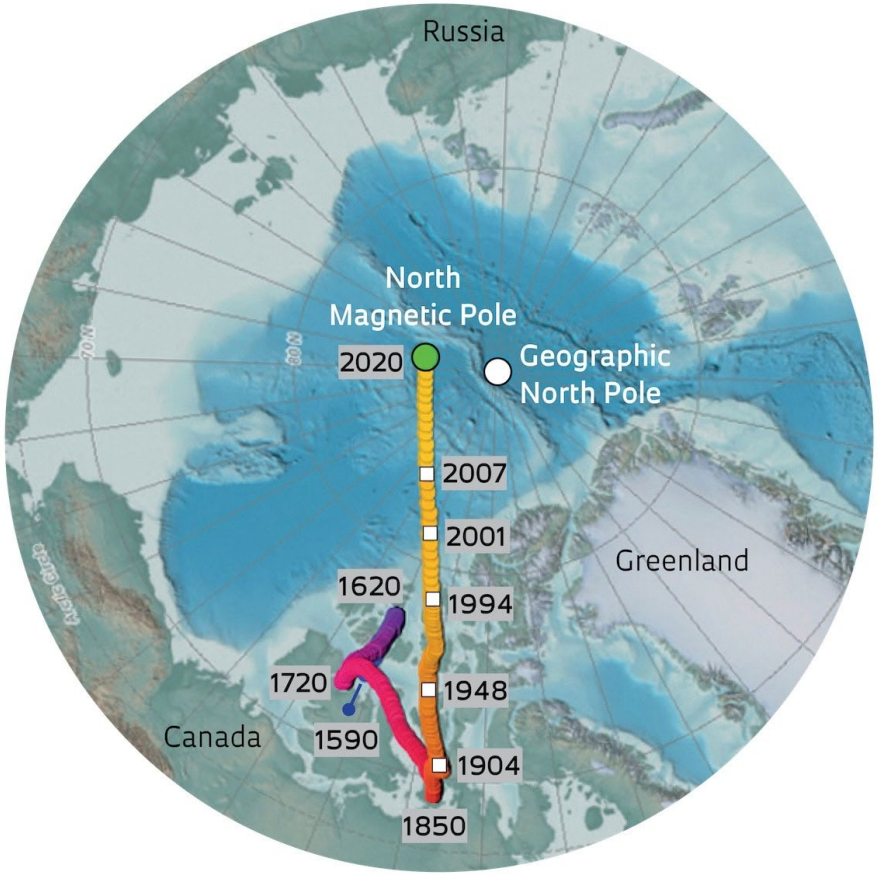
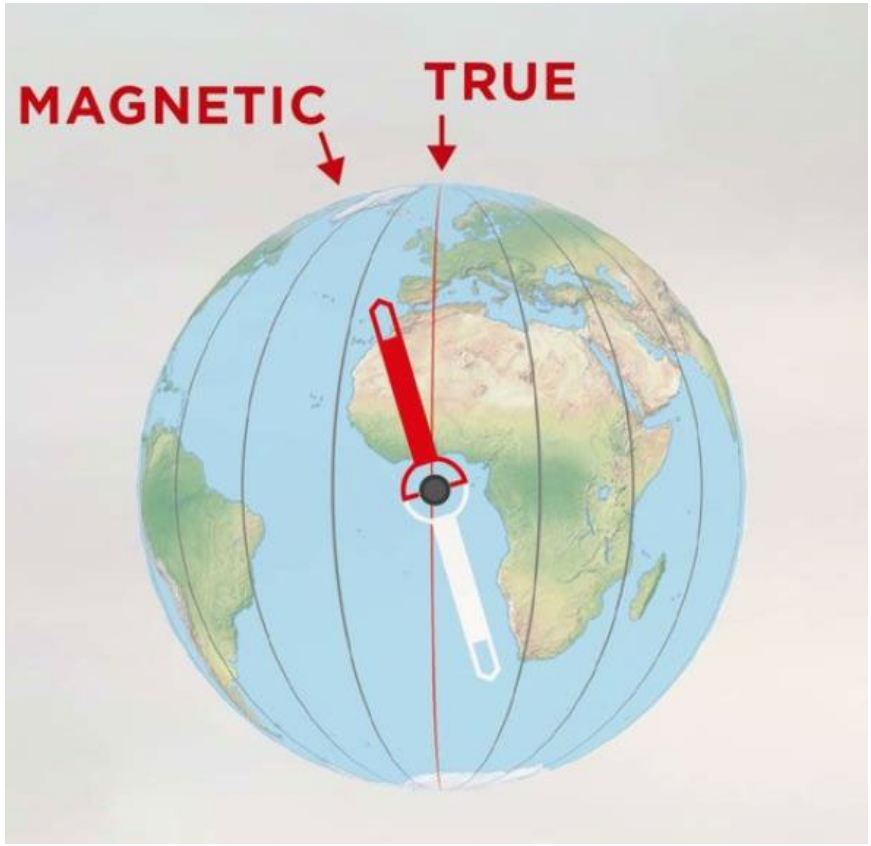
الهيئة العامة للطيران المدني
GENERAL CIVIL AVIATION AUTHORITY

United Arab Emirates

Evaluation of the Transition's Impact from Magnetic to True North

Presented By: UAE





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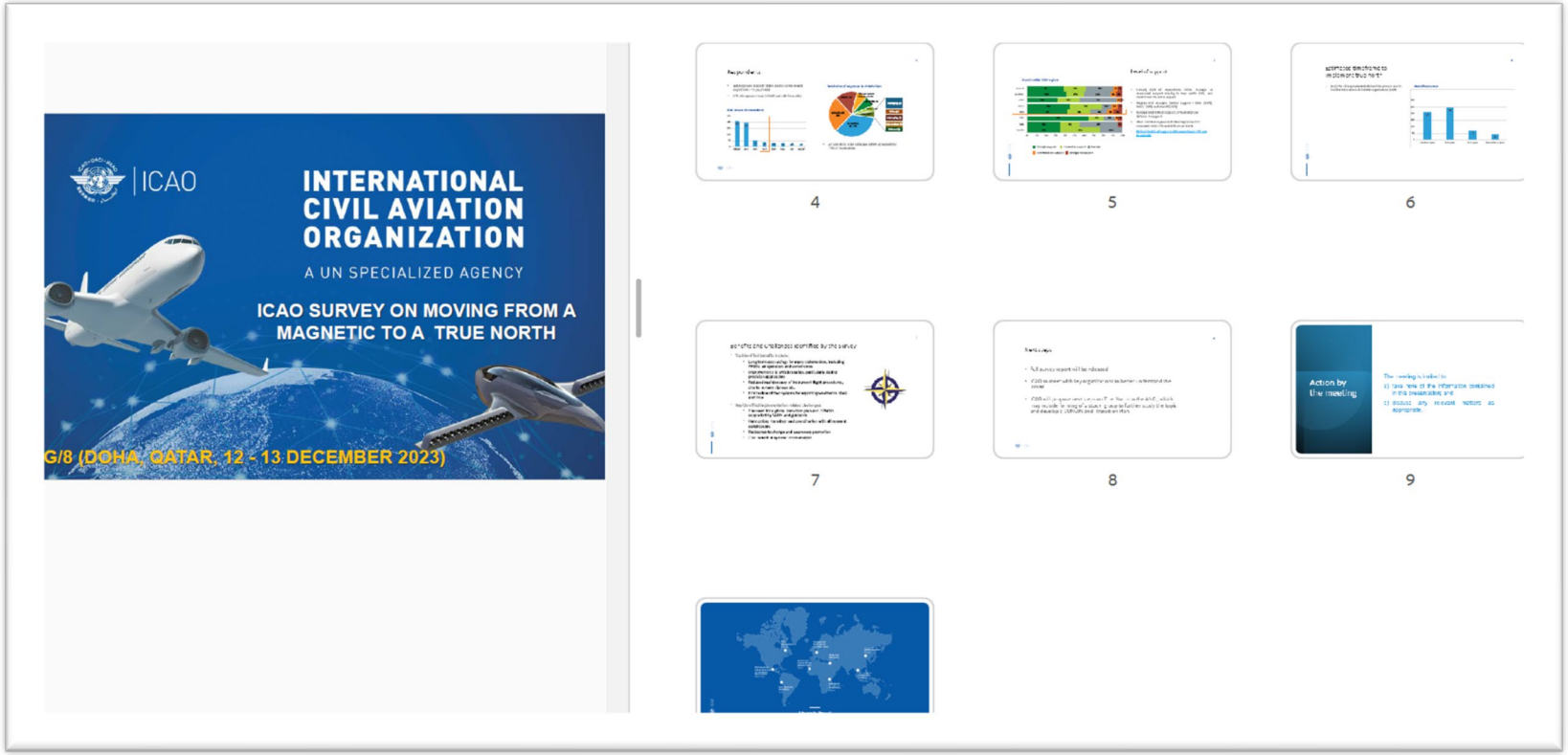
PBN SG/8 Working Paper Overview (Doha, 12-13 Dec)

ICAO Survey on Moving from Magnetic to True North

- ICAO conducted a survey to assess the transition's impact on air operations.
- Feedback gathered from states covered technical, operational, and cost impacts.
- The conclusion highlighted the importance of global collaboration for a successful transition.



Related Working Papers

- Canada presented papers to the ANC detailing the change to switch to a True North Reference system in aviation
  - AN Conf/12 WP/147
    - Para 6.5.25: ICAO invited interested states to study the technical, operational, and economic impacts, as well as the costs and benefits.
  - AN Conf/13 WP/114
    - Para 3.44: ICAO should explore the costs and feasibility of adopting True North.
    - *Recommendation 3.5/4*: Conduct a detailed study on the technical, operational, and economic feasibility.

ICAO State Letter – Expert Nominations (3 January 2024)

➢ ICAO Request for Expert Nominations (Ref.: AN 11/65-IND/24/1)

- At the seventh meeting of its 224th Session, held on 7 November 2023, supported the establishment of the True North Advisory Group (TRUE-AG)
  - ICAO invited states and organizations to nominate experts for TRUE-AG.
  - Participating Countries & Organizations:
    - Australia, KSA, USA,UAE, Incorporated (ARINC), (CANSO), (EASA),(EUROCONTROL),(GAMA), (IAIN), (IAOPA), (IATA), (IBAC), (ICASC), (ICCAIA), International Federation of Air Line Pilots' Associations (IFALPA), (IFATCA) and others.
  - Task: Develop CONOPS, analyse impacts, and conduct studies on costs, benefits, and safety.

Tasks and Required Expertise for TRUE-AG

- Tasks:
  - Develop CONOPS for True North implementation.
  - Conduct studies on impacts (cost-benefit analysis, safety, and SWOT).
- Required Expertise:
  - Air navigation, regulatory compliance, avionics, air traffic control (ATC), procedure designers, etc.

Transitioning to True North Advisory group

D11

	A	B	C	D	E	F	G	H
1	**Systems:**	**Components:**	**1.** Will all aeronautical data need to be reassessed from scratch?	**2.** What rotation requirements are required for the listed navigation aids, for example, remotely or manually?	**3.** What rotation/realignment is required for surveillance systems?	**4.a.** Training: a.What training will be required for staff leading up to and after the change?	**4. b.** Will this be different than the training currently done following a magnetic change?	**5.** Are there any other considerations?
2	All Aeronautical Data:	RADAR, ADSB, MLAT, ASDE, Video Mapping						
3	Surveillance							
4	Flight Planning Systems:	creation, conformance						
5	Navigation Systems:	VOR, DME, TACAN, NDB, VDF, TLS, SBAS, GBAS, ILS, vectors, Others?						
6	Third party data systems:	Jeppesen, LIDO, Nav Blue, Engine out route developers, etc.						
7	Weather systems:							
8								

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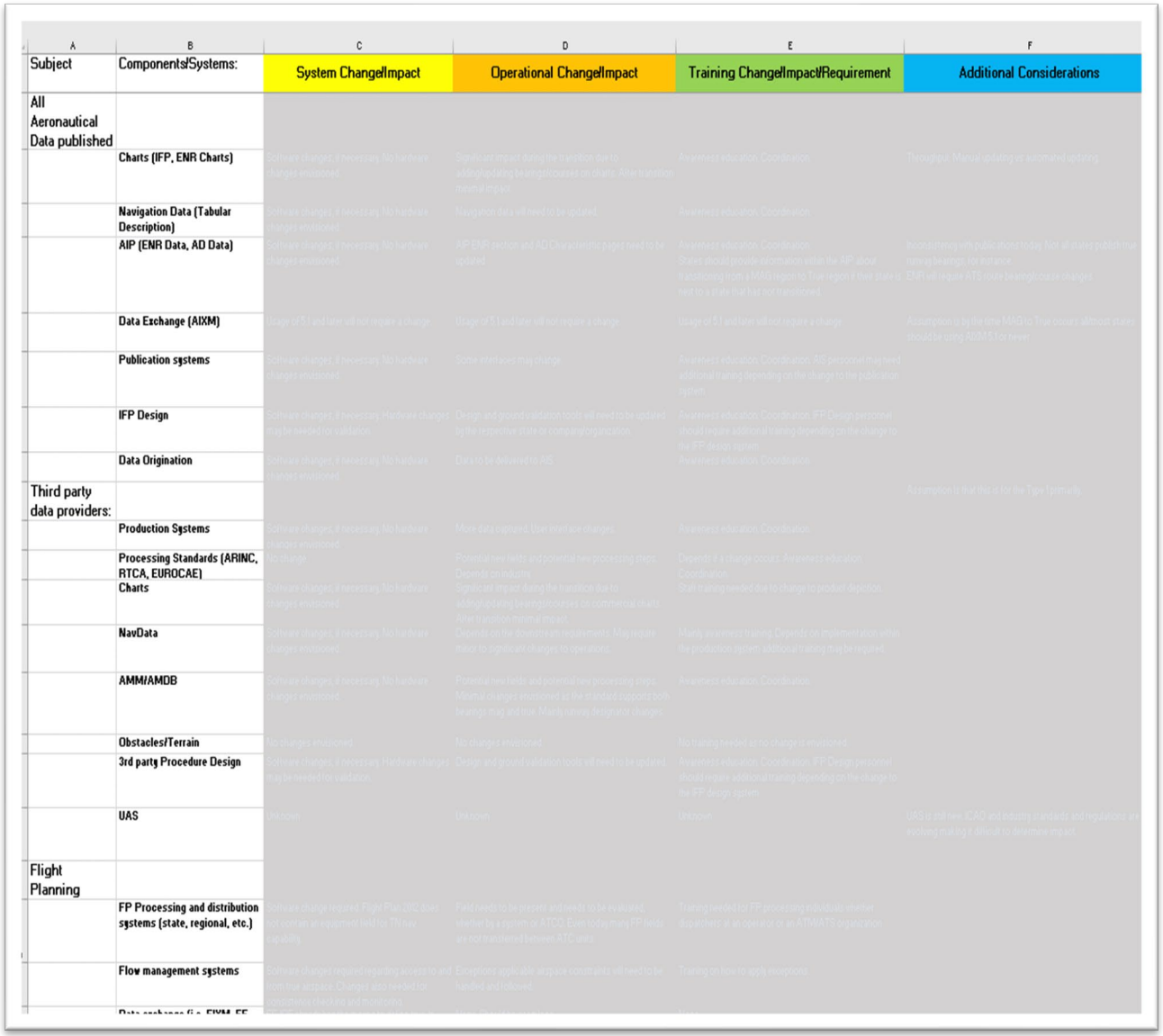
Subject	Components/Systems:
All Aeronautical Data published by a state:	
	Charts (IFP, ENR Charts)
	Navigation Data (Tabular Description)
	AIP (ENR Data, AD Data)
	Data Exchange (AIXM)
	Publication systems
	IFP Design
	Data Origination
Third party data providers:	
	Production Systems
	Processing Standards (ARINC, RTCA, EUROCAE)
	Charts
	NavData
	AMM/AMDB
	Obstacles/Terrain
	3rd party Procedure Design
	UAS
Flight Planning Systems:	
	FP Processing and distribution systems (state, regional, etc.)
	Flow management systems
	Data exchange (i.e. FIXM, FF-ICE)/Creation, conformance
	3rd party FP service providers
Surveillance Systems:	
	Ground Based (RADAR, ADS-B, MLAT, ASDE, SMR)
	Space Based (ADS-B, ADS-C, GADSS, ADT)
Navigation Systems:	
	Ground Based (VOR, DME, TACAN, NDB, VDF, ILS)
	Space Based
	Management System
Communication Systems:	
	VHF, SATCOM, CPDLC, UHF
Weather systems:	
	Weather/MET Sensing and Display (Video Mapping)
ATM/UTM System:	
	ATS/ATC Procedures (Separation, etc.)
	Chart Video Mapping
	Surveillance data processing
	Flow and capacity tools
	ATS/ATCO displays (targets, target tools, maps, overlays, display orientation)
	ATS (ATCO, ATC and ATS Specialists) Personnel



A	B	C	D	E	F
Subject	Components/Systems:	System Change/Impact	Operational Change/Impact	Training Change/Impact/Requirement	Additional Considerations
All Aeronautical Data published					
	Charts (IFP, ENR Charts)				
	Navigation Data (Tabular Description)				
	AIP (ENR Data, AD Data)				
	Data Exchange (AIXM)				
	Publication systems				
	IFP Design				
	Data Origination				
Third party data providers:					
	Production Systems				
	Processing Standards (ARINC, RTCA, EUROCAE)				
	Charts				
	NavData				
	AMM/AMDB				
	Obstacles/Terrain				
	3rd party Procedure Design				
	UAS				
Flight Planning					
	FP Processing and distribution systems (state, regional, etc.)				
	Flow management systems				

Thank You