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Ministry of Transportation
and Telecommunications

Sixth Meeting of the Aeronautical Information Management Sub- Group (AIM SG/6)

Cairo, Egypt, 21-23 Jan 2020

Kingdom of Bahrain

BCAA



Outline

- **Bahrain National AIM Implementation Roadmap**
- **Status of AIM Implementation and future plans**
 - B0-DATM Implementation
 - Outlook 2023
- **Status of AIM Deficiencies**
- **Lessons Learned**
- **Challenges**
- **Recommendations**



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Bahrain National AIM Implementation Roadmap

Bahrain Aeronautical Information Service



AIM Roadmap & Strategy 2023



Transition from AIP production to Static Data Organization to AIM

Version 5.0 2018

AIM SG/6, Cairo, Egypt, 21-23 Jan 2020



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Bahrain National AIM Implementation Roadmap

➤ Implementation Status:

- **Phase One: 100%**
 - Quality requirements;
 - AIRAC adherence;
 - Implementation & Adoption of standard reference system for coordinates (World Geodetic System-1984);
 - Provision of Terrain and Obstacle data.



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Bahrain National AIM Implementation Roadmap

➤ Implementation Status:

- **Phase Two: 90%**
 - Introduction of database-driven processes
 - Improved quality and availability of products
 - National & regional databased products and services
 - Enhanced quality and availability
 - Electronic AIP initiation



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Bahrain National AIM Implementation Roadmap

➤ Implementation Status:

- **Phase Three: 60%**
 - Support new AIM functions
 - Improved Quality control
 - Training
 - Planned future ATM components products and services for the new provision of air navigation concept



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Status of B0-DATM Implementation

Abbreviations used in Status Tables:

NI: Not implemented

PI: Partially Implemented

FI: Fully Implemented

NC: Not Compliant

PC: Partially Compliant

FC: Fully Compliant

N/A: Not Applicable

Note – NC/PC/FC is used for the provisions required by SARPS; NI/PI/FI are regionally agreed requirements



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| Provision of AIS/AIM products and services based on the Integrated Aeronautical Information Database (IAID) | | | |
|---|--------|-------------|--|
| Elements | Status | Action Plan | Remarks |
| Integrated Aeronautical Information Database (IAID) | FI | | |
| AIXM (+version) | FI | | AIXM 5.1 (2016) |
| eAIP (IAID-based) | FI | | |
| NOTAM (IAID-based) | FC | | |
| SNOWTAM (IAID-based) | FC | | |
| PIB (IAID-based) | FC | | |
| Charting (interoperable with IAID) | FC | | Exception: Aerodrome (PC) upgrade plan: 2019 |
| Procedure Design (interoperable with IAID) | FI | | |
| ATS (interoperable with IAID) | FI | | |



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| Aeronautical Data Quality | | | |
|--|--------|-------------|--|
| Elements | Status | Action Plan | Remarks |
| Quality Management System (QMS) | FC | | |
| Formal agreement with originators | FC | | Exception: Military (ongoing) |
| Digital data exchange with originators | PC | 2020 | Ongoing gradual exchange interface developments with major originators |
| Metadata | FC | | |
| Data quality monitoring | FC | | |
| Data integrity monitoring | FC | | |
| AIRAC adherence | FC | | |



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| WGS-84 | | | |
|----------------------------|--------|-------------|---------|
| Elements | Status | Action Plan | Remarks |
| FIR/ENR | FC | | |
| Terminal | FC | | |
| AD | FC | | |
| Geoid Undulation (GUND) | FC | | |



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| electronic Terrain and Obstacle Datasets (eTOD) | | | |
|---|--------|-------------|--------------------------|
| Elements | Status | Action Plan | Remarks |
| Area 1 Terrain | N/A | | |
| Area 1 Obstacles | FC | | |
| Area 4 Terrain | N/A | | |
| Area 4 Obstacles | FC | | |
| Area 2a Terrain | N/A | | |
| Area 2a Obstacles | FC | | |
| Area 2b Terrain | N/A | | |
| Area 2b Obstacles | FC | | |
| Area 2c Terrain | N/A | | |
| Area 2c Obstacles | FC | | |
| Area 2d Terrain | N/A | | |
| Area 2d Obstacles | FC | | |
| Area 3 Terrain | N/A | | |
| Area 3 Obstacles | FC | | |
| AMDB | N/I | | (BAIMS new version) 2019 |



Outlook 2020

(Status of B0-DATM by 2020)



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| B0 – DATM: Service Improvement through Digital Aeronautical Information Management | | | | |
|--|-----------------|--------|-----------------------|--------------------------|
| Elements | Applicability | Status | Action Plan/Timelines | Remarks |
| National AIM Roadmap | State | FC | | Updated (Version 5 2018) |
| AIXM (+version) | State | FC | | AIXM 5.1 (2016) |
| eAIP | State | FC | | |
| QMS | State | FC | | |
| WGS-84 | ENR | FC | | |
| | AD | FC | | |
| | TMA | FC | | |
| | GUND | FC | | |
| eTOD | Area 1 Terrain | N/A | | |
| | Area 1 Obstacle | FC | | |
| | Area 4 Terrain | N/A | | |
| | Area 4 Obstacle | FC | | |



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Status of AIM Deficiencies

- NIL AIM Deficiencies.



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Lessons Learned

- **Stakeholders involvement**
- **Sharing the National AIS-AIM Road Map will result positive awareness and collaborative implementation**
- **Planned Effective Implementation of the transition inline with ASBU timelines**



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Challenges

- **System upgrades difficulties in terms requirements of the adoption of amendments**
- **Originators SLAs**
- **Continuous training**
- **Stakeholders & Originators awareness**



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Recommendations

- **Transition plan development in accordance with the MID Air Navigation Strategies, GANP and ASBU's regional requirements/priorities**
- **Development of the AIS-AIM transition Action Plan and performance monitoring mechanism (SPIs/KPIs)**
- **Regulatory role in the implementation process**



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Thank you