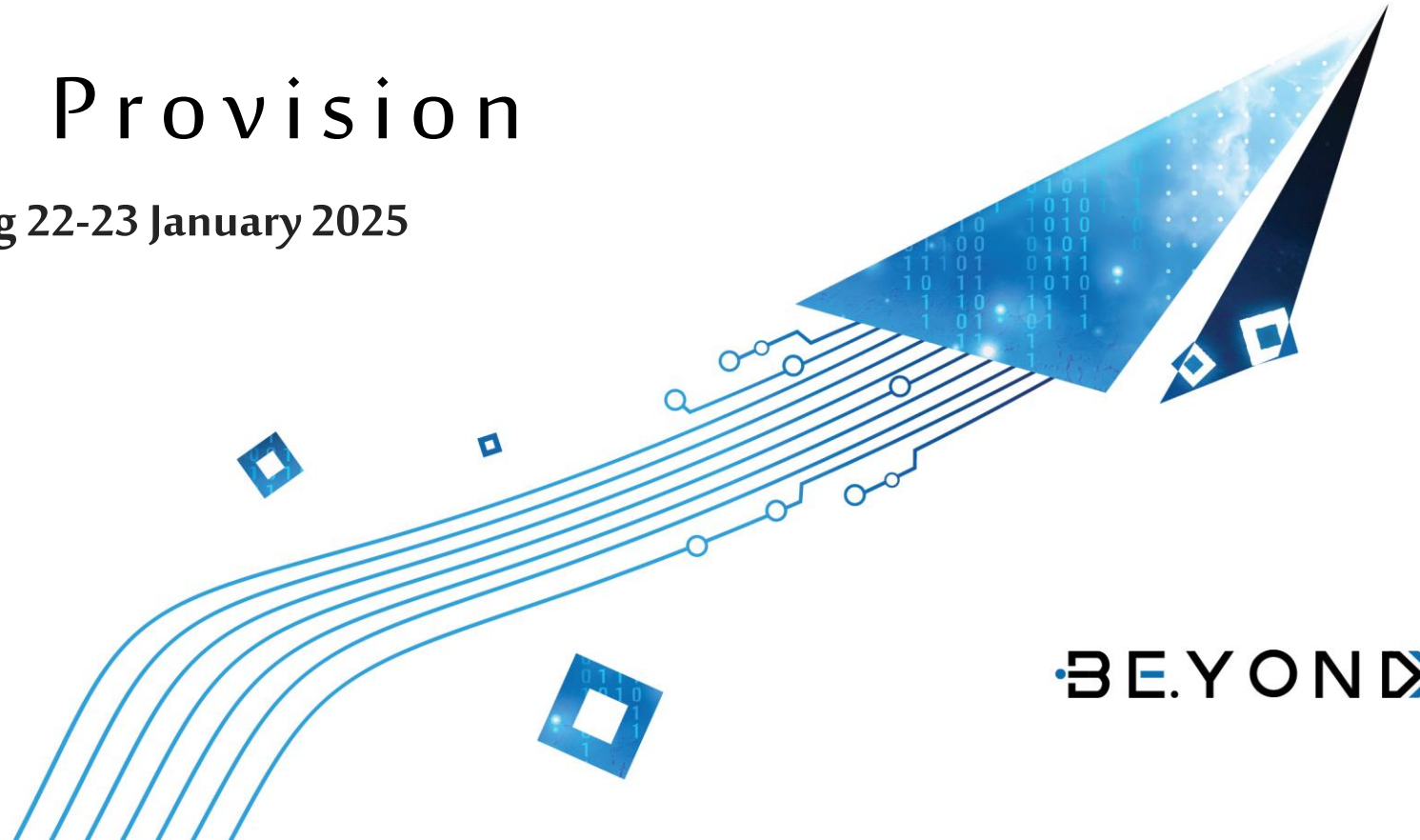


KSA Data sets Provision

ICAO MID AIM Sub-Group Meeting 22-23 January 2025

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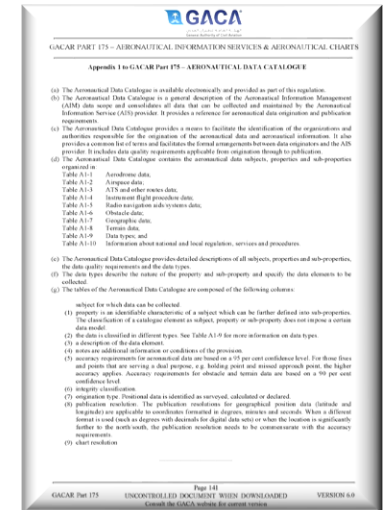
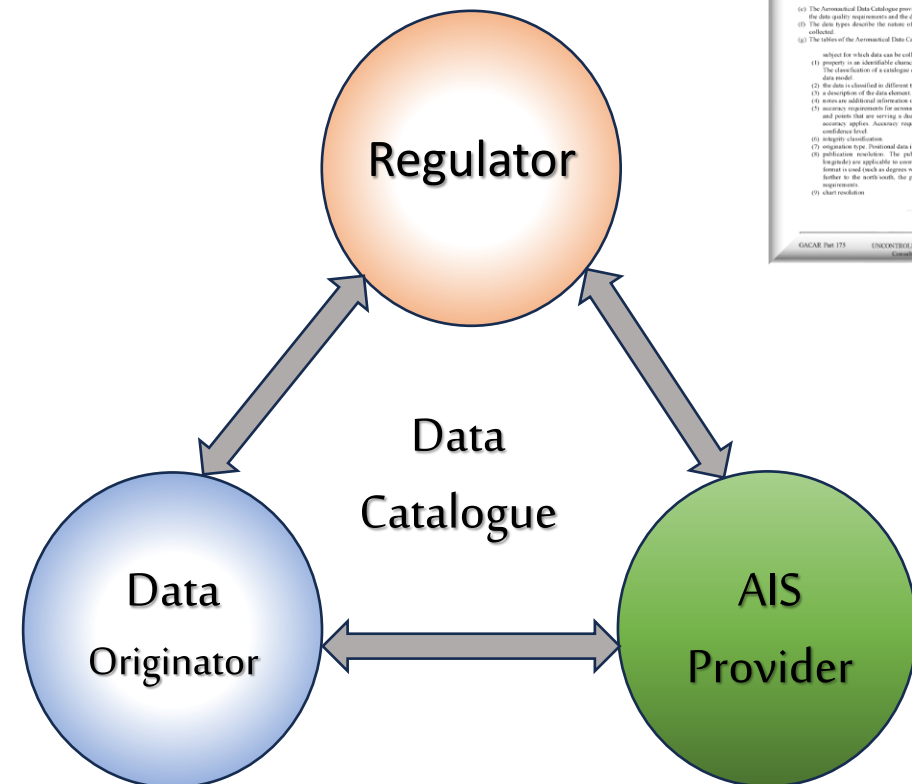
Contents

- GACAR Part 175
- AIM automation system Capabilities
- KSA Approach datasets implementation
- KSA data sets implementation roadmap

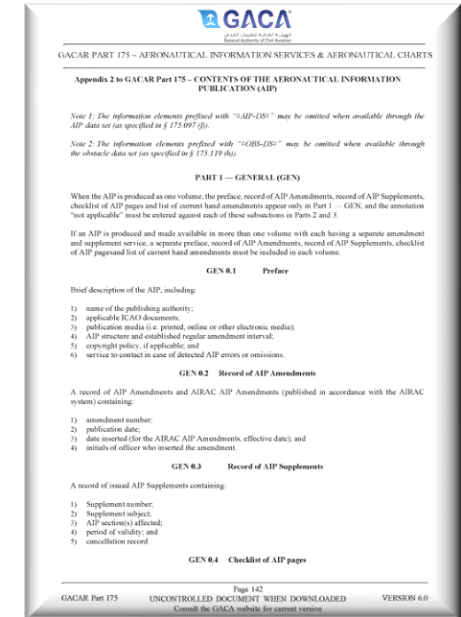


➤ Introduce the Aeronautical Data Catalogue, a tool in support of implementing the data-centric

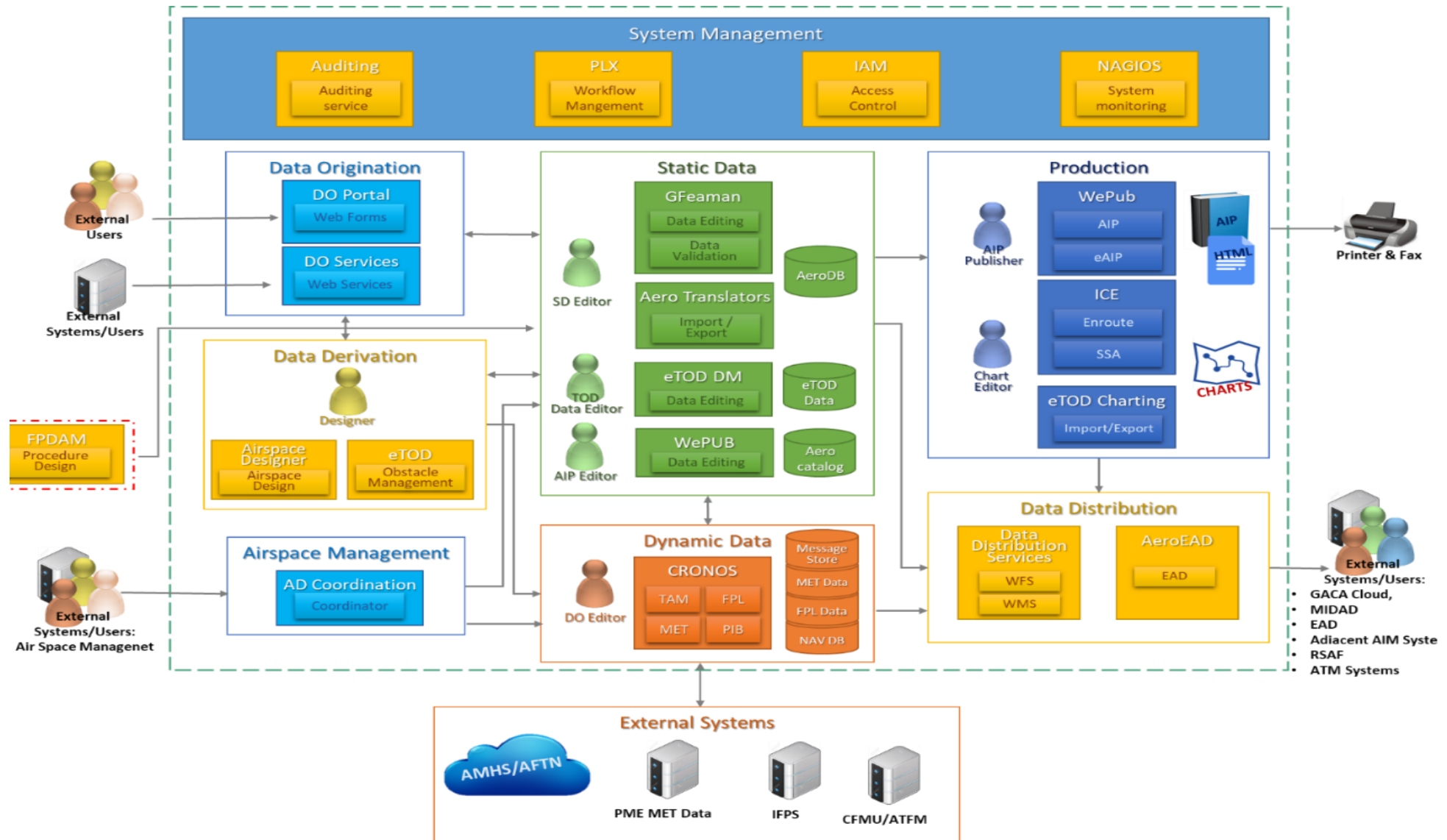
- Common language for the data centric environment
- Common defined AIM data scope
- Focus on data and data quality requirements



- Introduce the Aeronautical Data Catalogue, a tool in support of implementing the data-centric
 - The information elements prefixed with “#AIP-DS#” may be omitted when available through the AIP data set
 - The information elements prefixed with “#OBS-DS#” may be omitted when available through the obstacle data set



New AIM automation system



➤ Data Set file naming

The AIP Data Set file will have the following name structure:

“OE_AIP_DS_Variant_YYYYMMDD.xml”, where:

- a) AIP_DS is a fixed text (meaning “AIP Data Set”).
- b) Variant is a mandatory element, and it can take one of the following values:
 - FULL - when the file contains a complete AIP data set or a subset thereof.
 - DIFF_BL - when the file contains an AIP Data Set Differences variant coded with BASELINE TimeSlices.
 - DIFF_DELTA - when the file contains an AIP Data Set Differences variant coded with PERMDELTA TimeSlices.
 - SUP - when the file contains a Supplementary AIP Data set.
- c) YYYYMMDD is the start of effective date in the format year, month, date.

Data Product Specification of KSA AIP data set

- The purpose of the data product is to provide AIP data for air navigation applications. GACAR Part 175 provides possible uses of the data.
- It is the responsibility of the users to determine if the data product meets their needs.
- DPS of KSA AIP data set will be published with the XML file.
- DPS is reviewed and updated regularly in accordance with AIRAC cycle.

<p>KINGDOM OF SAUDI ARABIA GENERAL AUTHORITY OF CIVIL AVIATION SAUDI AIR NAVIGATION SERVICES AERONAUTICAL INFORMATION MANAGEMENT</p> <p>Data Product Specification of KSA AIP Dataset</p>											
Version	1.0										
This version	https://aimss.sans.com.sa										
Latest version	NIL										
Published	2025-01-23										
Language	English										
Extent of the data product	OEDJ FIR										
Topic category	Transportation										
Keywords	AIP										
<p>Abstract of the data product</p> <p>The aeronautical data of the KSA AIP data set are collected and published according to GACAR Part 175. This data set is a full data set, and it contains the following aeronautical data features:</p> <ul style="list-style-type: none"> a) Air Traffic Services (ATS) airspace. b) special activity airspace. c) ATS route and other route. d) route segment. e) waypoint – en-route. f) aerodrome/heliport. g) Runway. h) runway direction. i) Final Approach and Take-Off (FATO). j) Touchdown and Lift-Off (TLOF). k) Radio navigation aid. <p>The descriptions and requirements of AIP data sets can be found in GACAR Part 175 §175.113.</p>											
<p>Contact Information</p> <table> <tr> <td>Organization</td><td>General Authority of Civil Aviation (GACA) Saudi Air Navigation Services (SANS) Aeronautical Information Management (AIM)</td></tr> <tr> <td>Address</td><td>P.O.Box: 929, Jeddah 21421, Saudi Arabia</td></tr> <tr> <td>Phone / Fax</td><td>+966 12 6848046 & +966 12 6848959 / +966 12 6405622</td></tr> <tr> <td>Email</td><td>aim@gaca.gov.sa aim@sans.com.sa</td></tr> <tr> <td>Website</td><td>http://www.gaca.gov.sa http://www.sans.com.sa</td></tr> </table>		Organization	General Authority of Civil Aviation (GACA) Saudi Air Navigation Services (SANS) Aeronautical Information Management (AIM)	Address	P.O.Box: 929, Jeddah 21421, Saudi Arabia	Phone / Fax	+966 12 6848046 & +966 12 6848959 / +966 12 6405622	Email	aim@gaca.gov.sa aim@sans.com.sa	Website	http://www.gaca.gov.sa http://www.sans.com.sa
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Website	http://www.gaca.gov.sa http://www.sans.com.sa										

GACAR and ICAO requirements

- ✈ Air Traffic Services (ATS) airspace (type, name, lateral limits, vertical limits, class of airspace);
- ✈ special activity airspace (type, name, lateral limits, vertical limits, restriction, activation);
- ✈ ATS route and other route (designator, flight rules);
- ✈ route segment (navigation specification from point to point, track, length, upper limit, lower limit, Minimum En-route Altitude (MEA), Minimum Obstacle Clearance Altitude (MOCA), direction of cruising level, required navigation performance);
- ✈ waypoint – en-route (identification, location, formation);
- ✈ aerodrome/heliport (ICAO location indicator, name, designator IATA, served city, certified ICAO, certification date, certification expiration date, control type, field elevation, reference temperature, magnetic variation, reference point);
- ✈ runway (designator, nominal length, nominal width, surface type, strength);
- ✈ runway direction (designator, true bearing, threshold, Take Off Run Available (TORA), Take-off Distance Available (TODA), Accelerate-stop Distance Available (ASDA), Landing Distance Available (LDA));
- ✈ Final Approach And Take-off (FATO) (designation, length, width, threshold point);
- ✈ Touchdown And Left-off (TLOF) (designator, centre point, length, width, surface type);
- ✈ radio navigation aid (type, identification, name, aerodrome/heliport served, hours of operation, magnetic variation, frequency/channel, position, elevation, magnetic bearing, true bearing, zero bearing direction);

KSA AIP DATA SETS

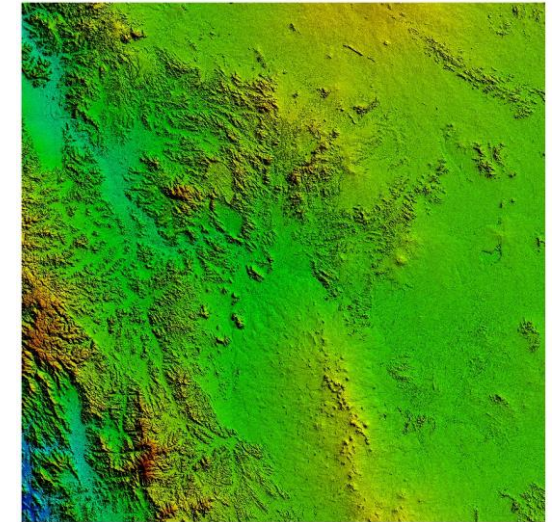


II. KSA Terrain Area 1 and Area 2

- GEN 3.1.6
- Dataset metadata
- Data Format
 - GeoTiff

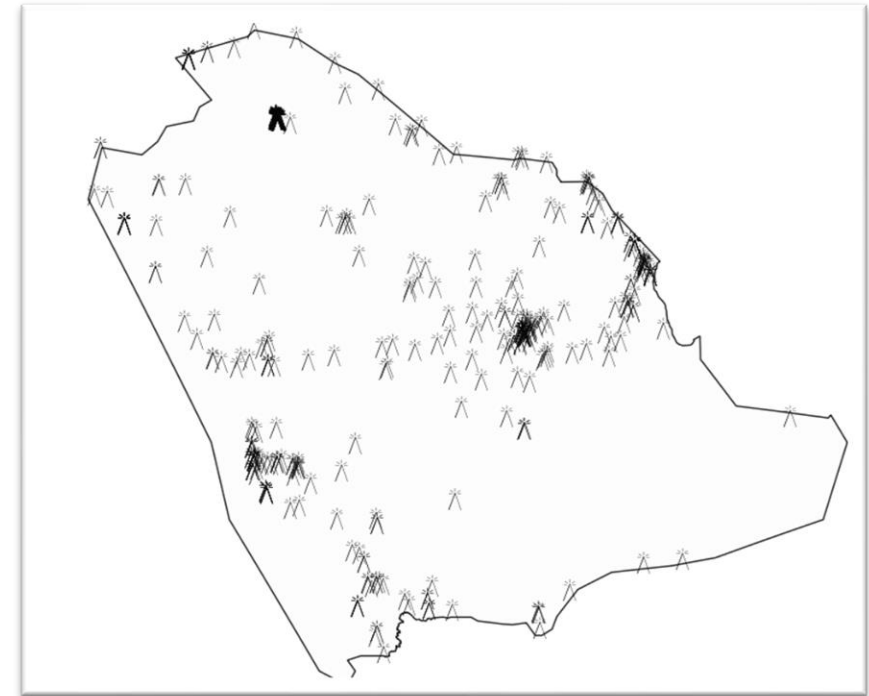
Terrain Metadata

Terrain attribute	Mandatory/Optional	Value
Area of coverage	Mandatory	Entire KSA
Data originator identifier	Mandatory	United ATS
Data source identifier	Mandatory	SRTM
Acquisition method	Mandatory	Synthetic Aperture radar
Post spacing	Mandatory	90 m
Horizontal reference system	Mandatory	WGS-84
Horizontal resolution	Mandatory	30m
Horizontal accuracy	Mandatory	50m
Horizontal confidence level	Mandatory	90%
Vertical reference system	Mandatory	EGM-2008
Vertical resolution	Mandatory	1m
Vertical accuracy	Mandatory	30m
Vertical confidence level	Mandatory	90%
Surface type	Optional	mixed
Recorded surface	Mandatory	First Reflective surface
Integrity	Mandatory	Routine 1x10-3



Obstacle Data Set Publication

- GEN 3.1.6: Area 1 and Area 2
- Transition period: AIP ENR 5.4 and AD 2.10 remains as it is.
- After transition period: AIP ENR 5.4 and AD 2.10 to be emptied
- Data formats:
 - Excel
 - **AIXM 5.1**

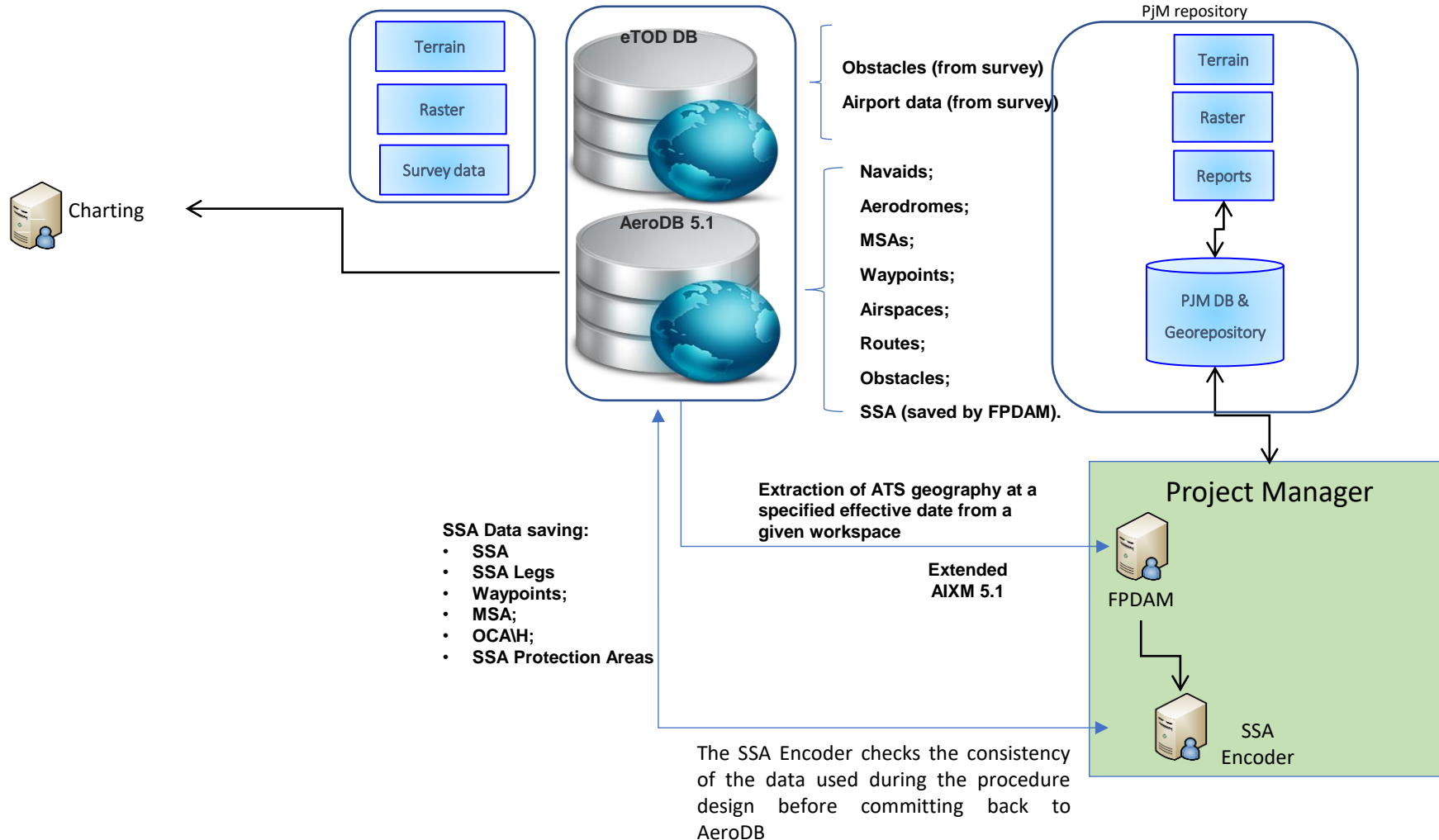


GACAR and ICAO requirements

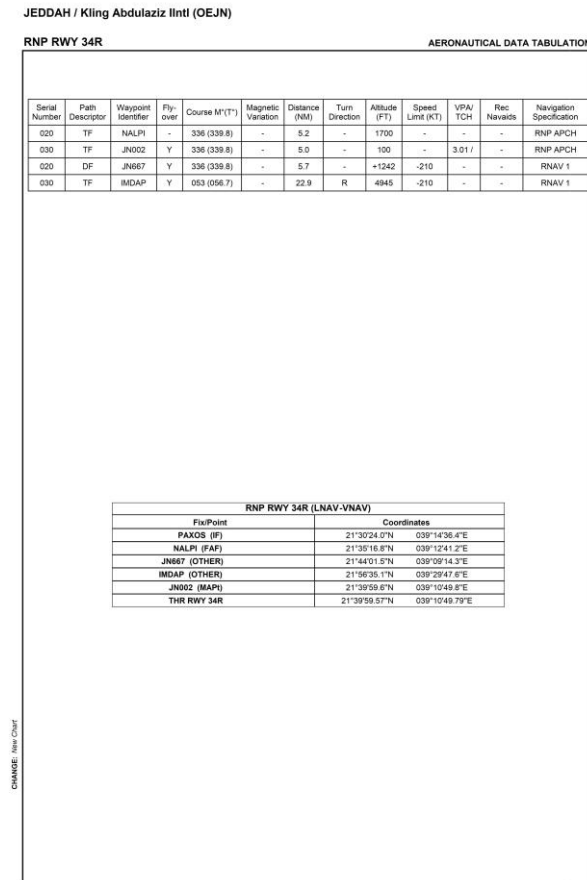
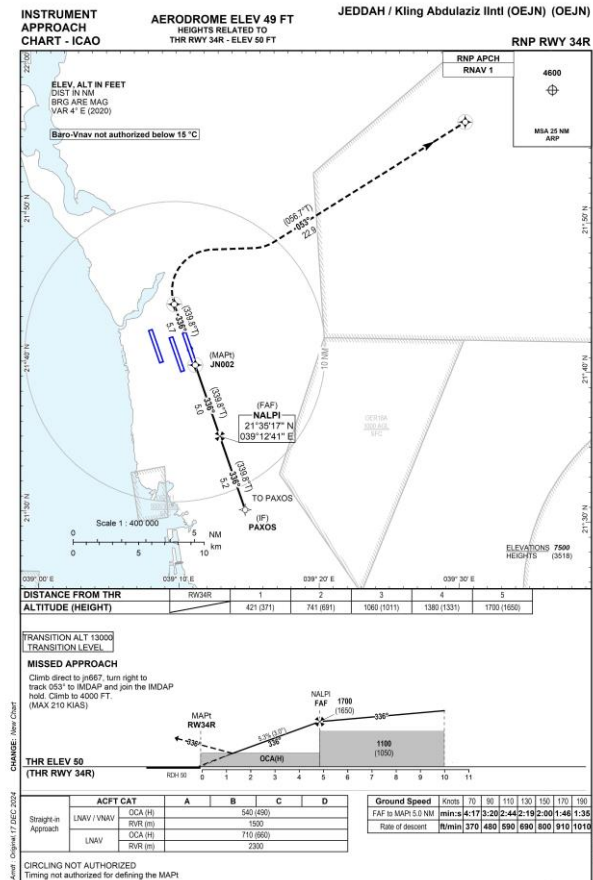
- ✈ The instrument flight procedure data set shall include data about the following data subjects, with the properties indicated in brackets being included as a minimum (if applicable):
- a) procedure (all properties);
 - b) procedure segment (all properties);
 - c) final approach segment (all properties);
 - d) procedure fix (all properties);
 - e) procedure holding (all properties); and
 - f) helicopter procedure (all properties).

INSTRUMENT FLIGHT PROCEDURE DATA SET MANAGEMENT

Integrated Mode



AUTOMATIC GENERATION OF CHART



[illegible]

Thank you

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