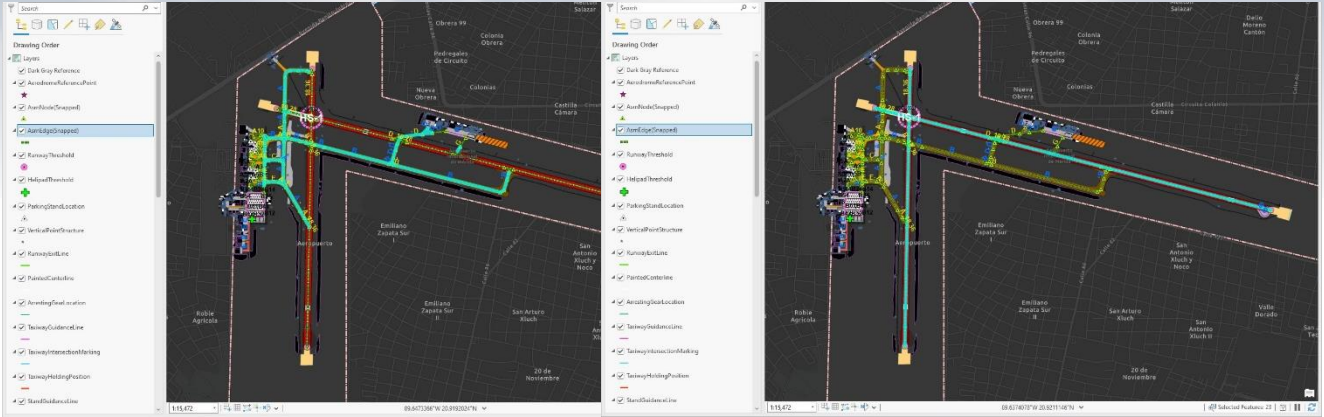# (SAAS) AMDB ASRN Auto-Population

Use Case: Name:	Originate Aerodrome Surface Routing Network (ASRN) from AMDB
ASBU:	**DAIM-B1/5: Provision of digital aerodrome mapping data sets**
PANS-AIM ADC:	Table A1-1 Aerodrome Data
Actors:	AIM Organization (primary), TFG-SAAS on AWS (secondary)
Summary Description	For an AMDB in the archive of the AIM Organization, originate the Aerodrome Surface Routing Network (ASRN)
Pre-Condition	(From Note-3 of PANS-AIM): "*The content of the aerodrome mapping data sets is defined in (RTCA) Document DO 272D (EUROCAE) Document ED 99 — User Requirements for Aerodrome Mapping Information*."
Post-Condition	Origination of ASRN Nodes and ASRN Edges, of the AMDB, for one or multiple aircraft defined in ICAO Aerodrome Code element 2; "A" thru "F"
Basic Path	1. The TFG-SAAS verifies that this is a valid customer in the S3 Cloud. 2. The AIM Org uploads the .zip up to the TFG-SAAS, in AWS S3. 3. The TFG-SAAS verifies that the .zip file contains the Parameter .XLS 4. The TFG-SAAS verifies that the .zip file contains DO-272 ED-99 Shapefiles of Point, Line, and Poloygon AMDB features 5. The TFG-SAAS verifies all needed Attributes for Population of Nodes. 6. The TFG-SAAS originates the ASRN_Nodes for Runway, Taxiway, Apron, Parking Area and Parking Positions. 7. The TFG-SAAS verifies that all Nodes are snapped to the underlying Runway, Taxiway, Apron, Parking Area and Parking Positions. 8. The TFG-SAAS originates the ASRN Edges for Runway, Taxiway, Apron, Parking Area and Parking Positions. 9. The TFG-SAAS assures the connectivity of all ASRN Edges in the AMDB.

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(SAAS) AMDB ASRN Auto-Population

Use Case: Name:	Convert Annex-15 Area-2ABC into Annex-14 OLS
Alternative Path	1a. The entity trying to upload the .zip file is not a valid customer 2a. The .zip file is not readable or does not pass a Virus Scan 3a The .zip file does not contain the Parameter .XLS 4a The .zip file does not contain any DO-272 features 5a The .zip file does not contain the AerodromeReferrencePoint or RunwayThreshold shapefiles 5b The .zip file does not contain proper Stopways or DisplacedArea 6a The ICAO Runway Code is not valid 7a The RunwayThreshold, Stopway, DisplacedArea coordinates lack 3D.
Business Rules	B1: Point, Line, Polygon AMDB SHP do not meet DO-276/DO-291 Schema B2: Point, Line, Polygon AMDB SHP do not meet DO-272 Raw Geometry B3: Point, Line, Polygon AMDB SHP do not meet DO-272 individual feature business rules B4: AMDB features to other AMDB features do not meet DO-272 AMDB business rules B5: Point, Line, Polygon AMDB Data lack ICAO Doc 10066 Metadata B6: Point, Line, Polygon AMDB Data lack Temporal Metadata
Non-Functional Requirements	NF1: Time for complete Analysis on AWS ESRI Instance NF2: Security for customer access NF3: Time to create (optional) OLS POV-Ray graphics NF4: Language support for translation of AMDB Code Tables NF5: VPN or IP Address incompatible with Security requirements

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