

AIR TRAFFIC & DEFENSE

AIR TRAFFIC MANAGEMENT

Avitech - Components and Modules for
ATM Data and Support Functions

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ATM



AVITECH - YOUR GUIDE FOR INFORMATION MANAGEMENT IN ATM

Avitech's mission is to support the creation of an integrated, safer, cleaner, civil and military air traffic environment by supplying the aviation industry with databases, tools and processes.

Our Competence

Developing a single, seamless and indeed truly global Air Traffic Management (ATM) system in line with the 15-year rolling strategic methodology of the ICAO Global Air Navigation Plan (GANP - Doc 9750) by introducing the consensus-driven Aviation System Block Upgrade (ASBU) systems engineering modernization strategy, at both regional and state levels.

Serving your Needs

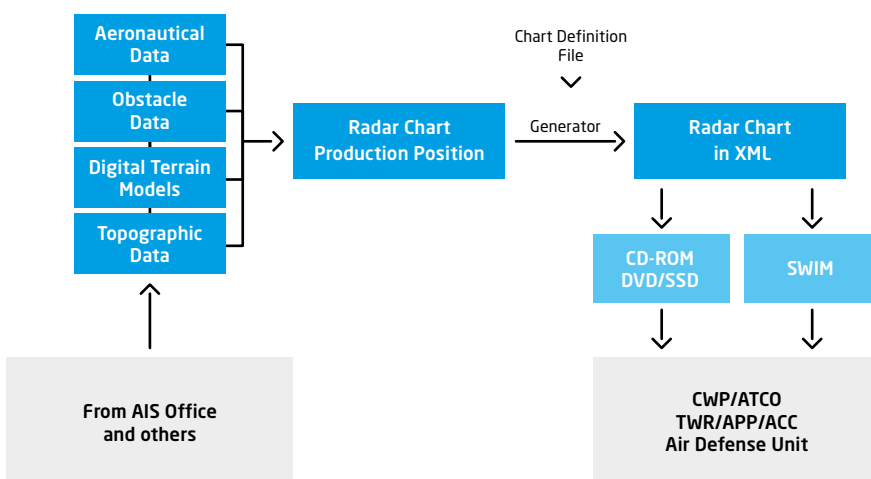
Key elements of Airspace Management include sharing airspace resources between civil and military users by means of the Flexible Use of Airspace concept, using airspace across national boards, implementing interoperability based on standards, and making Aeronautical Information Management data available within the Air Traffic Management domain through an uninterrupted electronic downstream process. In order to make maximum use of all these concepts, the implementation of collaborative decision-making processes is paramount.

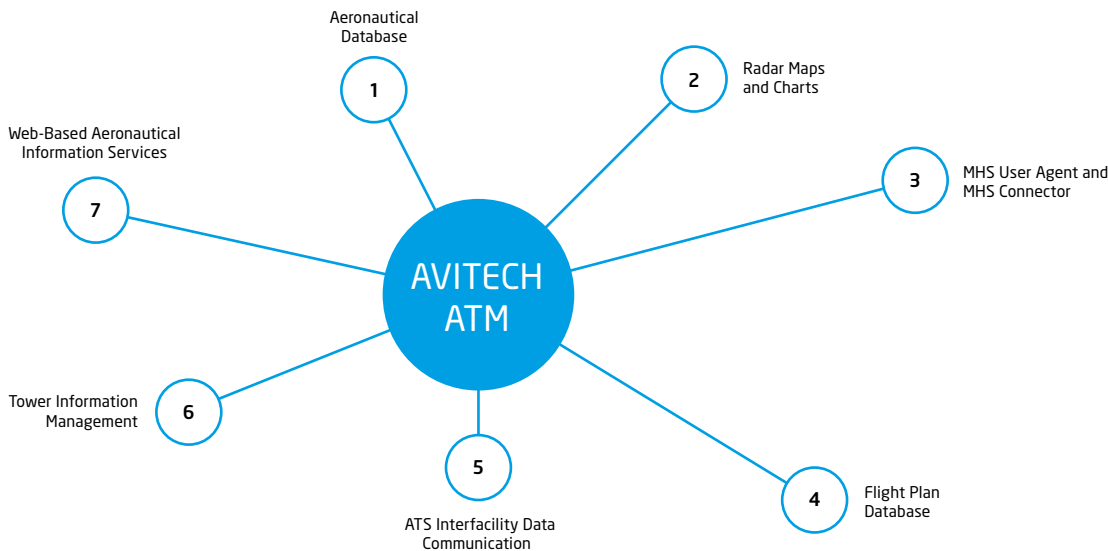
Avitech ATM Technology

Avitech has been supporting the ATM community for over 35 years. As a long-time pioneer, we feel committed to provide not only cutting-edge products and services to our clients, Avitech's focus in the area of ATM is also on interfacility interoperability between civil and military ATC units taking different classification levels of those systems into account, online data interchange between centers as well as centers and towers, tower information management systems, integrated flight plan systems, radar chart generation software, and SWIM.

As an ATM Data & Infrastructure provider we offer, inter alia, the AIXM 5.1, FIXM 4.0, and IWXM 2.0 data and process compliance for ATM systems. Our AVITECH SWIM WFS-T 2.0 OGC compliant implementation will play for certain a key role.

Radar Chart Generation Process





ATM Product Range

You can rely on Avitech to set up your inter-center communication between civil and military centers in order to foster the automation of the Flexible Use of Airspace concept and to use airspace as a shared resource in your country. This is our modular ATM product range:

1 Aeronautical Database

The Aeronautical Database stores all necessary data for PBN, Procedure Design, Terrain Data, Obstacle Data, Aerodrome Mapping Data (AMDB), NOTAM management as well as publication of AIP and related publications and aeronautical maps. By using this AIXM 5.1 compliant database in an ATM system, all those data are seamlessly accessible by the various ATM operational and support functions through our pioneer SWIM solution.

2 Radar Maps and Charts

Our comprehensive solution for radar chart production covers the entire chart production lifecycle from chart definition and automated generation, manual adjustment, validation, approval and distribution. One of its key functions is the ability to generate radar maps and charts for ATC Systems using XML schema technology. Any radar chart can be generated, this includes radar charts for en-route, airport environment and SMGCS charts based on the AIXM 5.1 Database using the AMDB Specification from RTCA Do-272D/EUROCAE ED-99D and RTCA Do-291C/EUROCAE ED-119C.

3 MHS User Agent and MHS Connector

Our MHS User Agent and the MHS Connector provide connectivity for ATC Controllers/ Supervisors and ATM systems to the AFTN and AMHS network. The Avitech SWIM pioneer also allows for connecting ATM systems to other SWIM implementations like the EU NM.

4 Flight Plan Database

Our Flight Plan Database copes with any Flight Plan and Associated Messages (FPL) defined by ICAO PANS-ATM (Doc 4444) and the European Network Manager document Flight Progress Messages. FPL Filing Applications are available for FPL validation and correct transmission over either the Avitech SWIM B2B EU NM Interface directly to EU NM or via AFTN/AMHS according ICAO Annex 10. Bookkeeping and management functions assist the end user. Regional FPL management and correction functions are additionally available. They can also be used as national FPL Centers. The Avitech FPL Database supports FIXM 4.0 and FPL transportation to other systems and can use the FIXM ATS Message Content Mapping.

5 ATS Interfacility Data Communication

This application provides an online data exchange for coordination between Air Traffic Control Units and/or Air Defense Units. It implements the EU Standards FMTP 2.0, OLDI 4.2, and ADEXP 3.0. The solution is prepared to be expanded to ICAO AIDC according to ICAO PANS-ATM (Doc 4444) and the Manual of ATS Data Link Applications (Doc 9694) as well as FIXM 4.0. The application is a prerequisite for connecting ATCUs and Air Defense Units in case of classified networks or systems being involved. The specific red/black gateway is evaluated according Common Criteria EAL4+ (ISO/IEC 15408) and certified by the German Federal Office for Information Security.

6 Tower Information Management

This system integrates all data needed for decision making by TWR ATCOs into one harmonized human-machine-interface comprising real time airport weather data, ATIS, OPMET messages, CCTV monitoring, NOTAM, FPL management, airfield lighting, SMGCS, multi tower monitoring display and control for larger airports and others.

7 Web-Based Aeronautical Information Services

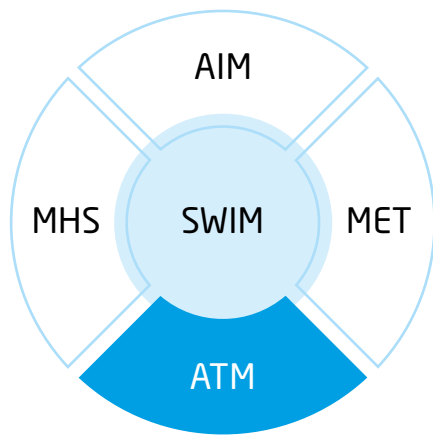
Designed for pilots and flight plan dispatchers, Avitech Web-Based Aeronautical Information Services (WEB AIS) solution makes it easier than ever to swiftly create flight plans. Seamless generation of Pre-Flight Information Bulletins (PIBs), featuring weather forecasts, charts, current NOTAMs and much more – all in a beautifully designed desktop experience accessible through your web browser.

Supports the visual creation of flight plans enhanced with geospatial data like waypoints, airways, aerodromes and other relevant data.



AVITECH - TECHNOLOGY YOU CAN TRUST

- ATS Interfacility Data Communication between ACCs and Air Defense Units to support the Flexible Use of Airspace Concept (FUA)
- AIM database-based radar chart generation
- Integration of all standards such as AIXM 5.1, FIXM 4.0, IWXXM 2.0, RTCA DO-272D / EUROCAE ED-99D



Experience & Know-how

Besides our purely civil solutions for Air Navigation Service Providers, Aeronautical Information Service Providers and Communication Providers, one of our main focuses is on the civil and military interoperability interfaces for Aeronautical Data and Messages, as well as On-Line Data Interchange (OLDI) and ATS Interfacility Data Communication (AIDC) making sure that higher classification levels of data, messages and networks are protected.

For more than 40 years Avitech has served the aviation industry as one of the leading international developers of aeronautical IT systems worldwide. Today Avitech supplies more than 45 customers in 55 countries on six continents with state-of-the-art aeronautical information technology.

Please ask for our complete product range or visit our website www.avitech.aero

Avitech & Indra

Avitech represents the Center of Excellence within the Indra Group for AIM, MHS, SWIM and MET, complementing the Indra ATM offering worldwide. The Indra Group's global business model is based on high-end innovation and technology, currently supporting 4000 air traffic control installations in over 160 countries.

The group is all set for ICAO Aviation System Block Upgrades (ASBUs): Compliance with Block 0 & Block 1 and paving the way to Blocks 2 & 3.

 **ASBU-Compliance**



2013 ——— 2019 ——— 2024



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