

Data Distribution Portal/Service

SWIM Compliance

DDP (Data Distribution Portal) and DDS (Data Distribution Services) are IDS AirNav’s operational modules for the distribution of aeronautical information through B2C and B2B SWIM-compliant services.

Designed to support the digital transformation of Aeronautical Information Management (AIM), they ensure full alignment with ICAO Doc 10039, EU Common Project One (CP1) requirements, and the latest European SWIM interoperability standards.

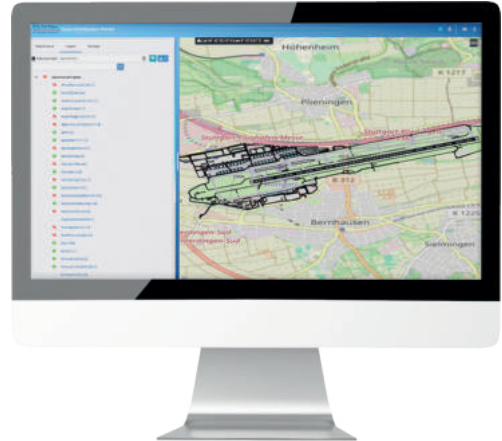
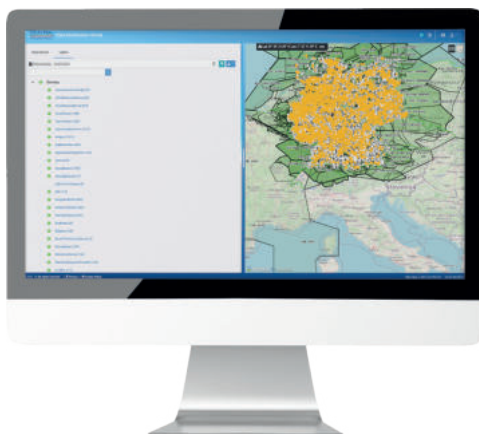


Figure 1 Data Distribution Portal »

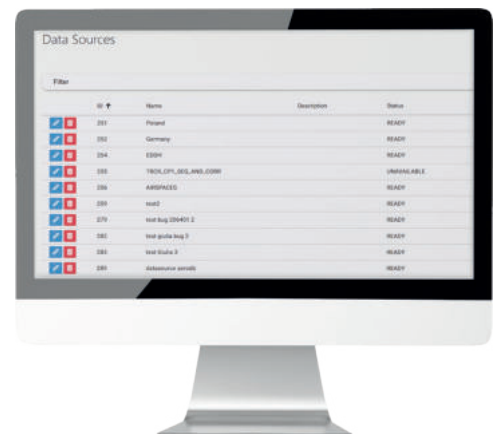
Applications for B2C and B2B data distribution

The distribution framework is built around the IDS AirNav ecosystem: DDP A web-based B2C portal enabling temporal navigation, data visualization, and operational use of aeronautical information and DDS B2C a B2B service layer that distributes aeronautical data to external systems through standard and SWIM-compliant interfaces:

Data Distribution Portal (DDP) B2C



Data Distribution Service (DDS) B2B



- Configurable number of datasources on user profile
- Datasources from IDS AirNav database or AIXM 5.x files
- Filters on features and attributes available
- Different effective date management
- Search capabilities by attributes or bounding box
- Interactive map for attribute information
- AIXM 5.x download capabilities
- Datasets download capabilities

- Each data sources marked as “Published By Service” in DDP will be available to B2B interfaces in DDS
- Specific profiling may be defined for B2B connections
- Expose datasets to external systems through WFS/WMS and other SWIM-compliant service endpoints.

Security Framework

DDP and DDS adopt a multi-layered security architecture ensuring trusted, authenticated, and encrypted data exchange. This approach guarantees robust protection of aeronautical data throughout its lifecycle.

- X.509 mTLS for mutual authentication and secure transport
- OAuth2 (client credentials) for delegated authorization and machine-to-machine access.

Optional Module: AeroEAD – EAD Data Exchange

For ANSPs requiring direct interoperability with Eurocontrol’s EAD environment, IDS AirNav provides AeroEAD, supporting:

- AIXM 4.5 and 5.1 data models
- ESI/AIMS interfaces
- SDO/SDD integration for data submission and retrieval
- PAMS for AIP and eAIP updates
- This module extends the DDP/DDS framework to fully cover the European AIM data chain.

Benefits

The DDP/DDS framework delivers a standards-compliant environment for the digital distribution of aeronautical information. Built for interoperability and secure data exchange it ensures consistent, reliable and traceable information flows across the entire SWIM infrastructure:

- **SWIM Data exchange:** Eurocontrol Yellow Profile for interoperable aeronautical data exchange
- **Safety control:** Security architecture protected by advanced access control
- **Unified data management:** Datasets, documents, and temporal information
- **Integrated AIM workflow:** Ensures consistent, traceable and streamlined workflows when combined with IDS AirNav’s data-management ecosystem.

Functionalities

- **SWIM-Compliant Data Distribution:** aeronautical data via B2B/B2C services aligned with ICAO Doc 10039 and CP1 SWIM requirements
- **Temporal Data Navigation:** allows searching and browsing aeronautical information according to effective dates and validity periods.
- **Web GIS Visualisation (eCHART):** displays AIP, obstacle and aeronautical datasets on an interactive web-based GIS viewer.



- **Multi-Dataset Handling:** manages multiple aeronautical datasets from AeroDB/AeroDC or AIXM 5.x sources.
- **Change Highlighting:** compare datasets across different dates to identify and visualise changes.
- **On-Demand Reporting & Export:** generate reports and exports data in AIXM, KML, SHP and other standard formats.
- **Document Access Services:** controlled access to AIP, SUP, AIC, eAIP and charts through a built-in document library.



» Figure 4 Document Distribution (profile, versioning, anonymous)