

Product brief: MosaiX SWIM

ATM-grade digital platform

Air navigation service providers (ANSPs) are facing two key challenges: the requirement to migrate from ATS message handling system (AMHS) to system wide information management (SWIM), and the requirement to integrate unmanned traffic management (UTM) with air traffic management (ATM). MosaiX SWIM provides all of the tools that ANSPs need to overcome these challenges and to facilitate the exchange of information between all industry stakeholders for better-informed decision making and shared situational awareness. MosaiX SWIM is a key enabler of the digital transformation that is taking place within the aviation industry.

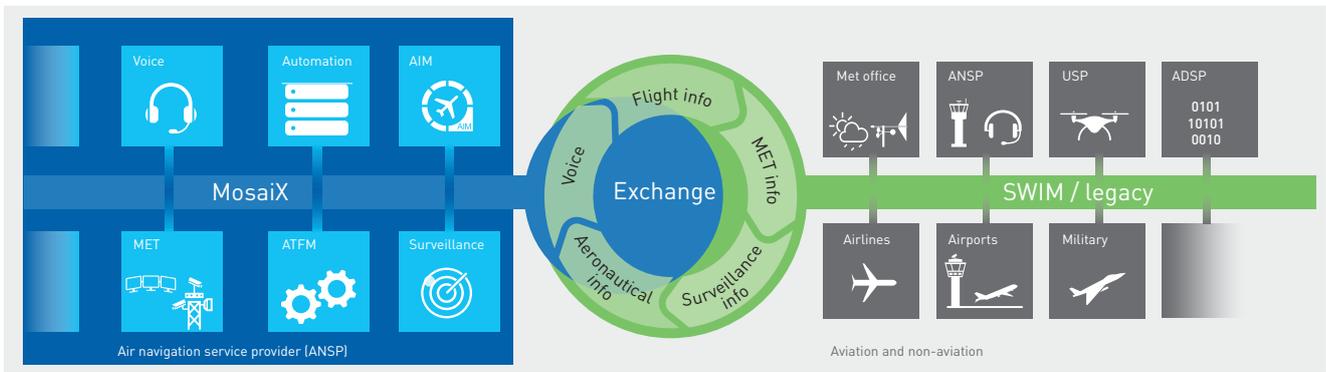
Key features

- Releases data from the constraints of traditional siloed storage and enables it to be fused with data from different sources and domains, giving ANSPs the tools to unlock and monetise their data.
- Provides an efficient API Manager and tools for billing consumers of services using models such as hourly billing or consumption-based billing.
- Offers preconfigured and customisable metrics and dashboards, together with data-analysis tools including early-deviation-recognition and pattern-discovery.
- Can be implemented with a feature-rich service catalogue that allows clients to easily find services provided by both local and regional publishers.
- Can be deployed in combination with vitalsphere™, the Frequentis ATM-grade network solution, with Frequentis SWIM applications such as CADAS-AIM and smartWeather, and with other Frequentis products.



MosaiX SWIM at a glance

- Built-in ATM/UTM services
- Connectors for interfacing with legacy systems
- Flexible deployment options, such as on-premises, private/public cloud, hybrid
- Fully compliant with all the SWIM standards
- Designed in accordance with ED-153 guidelines for ANS software safety assurance
- Enables data fusion from different sources and domains
- High availability & resilience



Benefits

Flexibility

MosaiX SWIM is designed around a microservices architecture and an open messaging system in which all software components exist as independent artefacts and communicate in a decoupled way. This reduces vendor lock-in by allowing customers to substitute components and incorporate new technologies in the future. MosaiX SWIM therefore represents a fundamental shift from today's monolithic solutions where adopting new technologies requires re-engineering the whole system.

High performance and availability

MosaiX SWIM offers a number of options for the message-broker component, including an appliance for customers with extremely high transaction or throughput requirements beyond 100,000 requests per second. The MosaiX SWIM solution features full redundancy, supporting five-nines availability (99.999%). The on-premises deployment features a mix of clustering and load balancing to enable features such as instant and transparent fail-over, while also safeguarding data integrity and consistency.

Technical specifications

Compliance	ED-153 guidelines for software assurance
Communication protocols	All protocols defined in the FAA NextGen and Eurocontrol SESAR SWIM green, yellow and purple specifications
Legacy system connectors	All connectors required for the connectivity to legacy systems (i.e. AFTN, AMHS)
Data storage models	Standard aviation exchange models (AIXM, FIXM, IWXXM)
Data query	Supports the Open Geospatial Consortium standards (WMS, WCS, WFS)
Service registry storage formats	XML documents, XSD schema files, images, PDF and DOC/DOCX files
Security and encryption	WS-Security, WS-Trust, TLS/SSL, OpenID Connect, MFA Standards

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