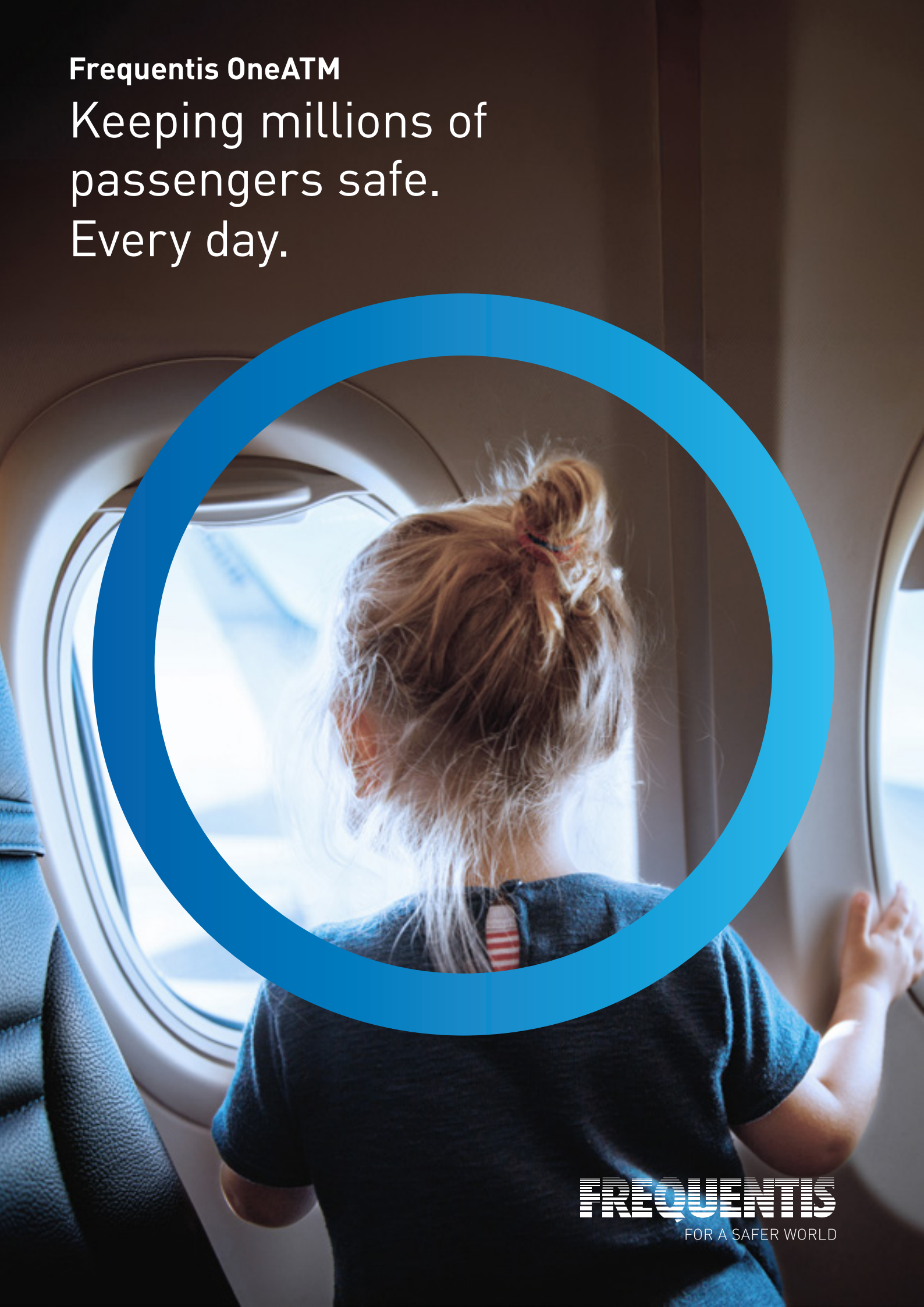
Frequentis OneATM

Keeping millions of passengers safe. Every day.



FREQUENTIS

FOR A SAFER WORLD

Every journey begins with trust.

Trust that the aircraft is safe. Trust that systems are reliable. Trust that the sky is organised, protected, and ready for whatever the future brings. At Frequentis, we carry this trust with us every day. Our technologies support more than 95% of global air traffic, helping millions of passengers reach their destination safely. This responsibility shapes how we think, how we design, and how we innovate. It is the foundation of OneATM, our vision for a safer, more integrated, and more resilient airspace.

Aviation is changing faster than ever as airspace becomes more connected, more digital, and more complex. Air traffic is moving from static procedures to predictive, synchronised, trajectory-based operations (TBO) that depend on shared intent, collaborative planning, and real-time coordination between stakeholders. Drones and emerging aerial mobility solutions require harmonised, automated, and cloud-native airspace management.
Controllers must make faster, smarter decisions in increasingly dynamic and complex conditions.
With the evolution towards the future communication infrastructure (FCI), alongside SAT-voice, LDACS, and unified voice-automation environments, communication is becoming an intelligent, integrated fabric rather than a standalone system.

And behind the scenes, the infrastructure that supports air traffic is transforming fundamentally as it moves to a service delivery model in which applications, data services, and automation are delivered as dedicated or fully managed services. Amid all this change, one thing remains constant: the need to maintain safety. Air navigation service providers (ANSPs) and airports therefore need flexible, open, and resilient systems that can be integrated, scaled, updated, and adapted without compromising safety. OneATM is our answer to this challenge. It brings together our entire ATM expertise into a single, coherent vision for the future.

The principles of OneATM

OneATM is the vision guiding how Frequentis shapes the future of airspace management. It represents a move from isolated systems to a connected, intelligent ecosystem, where every component, from tower to en-route, from communication to data, from manned to unmanned, works together seamlessly.

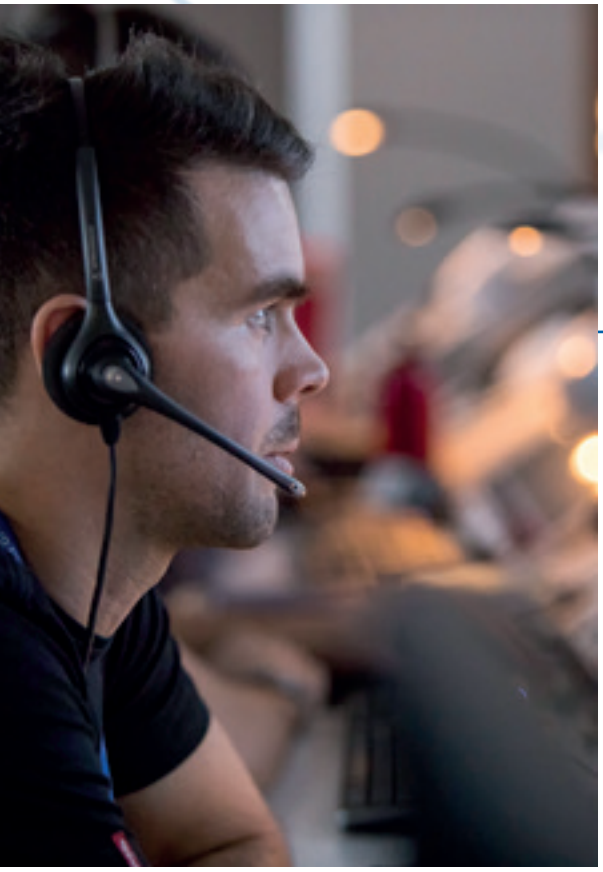
Frequentis OneATM brings technologies together to reduce complexity and make operations simpler and more intuitive. Built on a modern, resilient architecture, it improves operational performance through the intelligent use of data, automation, and AI. By opening interfaces and platforms, OneATM enables greater collaboration across systems and stakeholders while continuing to innovate wherever safety demands it. At the same time, Frequentis supports customers in their transition to cloud and service delivery models, ensuring a smooth and secure evolution of their operational environments.

OneATM is not a product. It is not a platform. It is our philosophy for protecting every flight, every day, integrating technology, reducing complexity, supporting controllers, enabling digital transformation, and preparing the sky for new challenges, always with passenger safety at its core.

To make our vision of OneATM a reality, we work according to a set of strategic focus areas, each representing an inflection point for ATM in the coming years. The focus areas guide the evolution of our products and the transformation of the operational environment around them. As aviation advances, we will continue to adapt the focus areas, expanding or consolidating them as new challenges emerge and others are successfully mastered.


Unified Aeronautical Communications
Beyond voice.
Trajectory-Based Operations
Uniting the sky.
Integrated Tower Solutions
Power at your fingertips.
Frequentis
OneATM
Accelerated Drone Management
Orchestration of new airspace users.
Harmonised Control Centres
Versatility meets integration.
Service Delivery Model
Interoperability in a cloud-native architecture.
ATM-Grade Networks
Empowering the digital sky.

Frequentis OneATM focus areas



Unified Aeronautical Communications

Frequentis offers the industry's first deeply integrated communications concept, taking air-ground interaction beyond voice by merging communication and automation into one controller-centric environment.

By bringing voice, digital information, and automation workflows together, we are reducing controller workload, strengthening situational awareness, and eliminating the need to switch between disconnected systems.

Our integrated approach creates a foundation on which new technologies such as SAT-Voice, LDACS, speech recognition, and intelligent safety nets can be introduced seamlessly, without adding complexity.

Integrated Tower Solutions

Whether enhancing a classic tower or enabling a fully digital remote setup, Frequentis empowers controllers with flexible, scalable, future-ready tower solutions built on shared data and harmonised, controller-centric interfaces.

Integrated automation, digital tower visualisation, voice communication, and recording work seamlessly together.

By combining surveillance, automation, and decision-support tools, controllers gain a clear, consistent operational picture across approach, tower, and ground domain, supporting safer decisions, higher efficiency, and predictable traffic flows, even in complex operations.

Service Delivery Model

Frequentis supports the transition to interoperable, cloud-native ATM services through modular, clearly defined service components that can be flexibly combined across vendors and systems.

Running in a virtualised, container-based architecture, these services enable seamless integration, standardised interfaces, and consistent performance.

A decoupled human-machine interface (HMI) allows services to evolve independently of the controller display, accelerating innovation, simplifying upgrades, and enabling a more agile, future-proof ATM ecosystem.

ATM-Grade Networks

As aviation transitions toward the FCI, Frequentis provides the safety-critical network foundation for a fully digital sky.
Our ATM-Grade networks deliver deterministic routing, ultra-high availability, real-time performance awareness, and seamless support for voice, surveillance, and data.

This robust layer enables ANSPs to migrate confidently from legacy to IP-based environments without disruption. Globally, Frequentis delivers managed, secure, and continuously supervised networks for large-scale, mission-critical operations, backed by decades of proven operational experience.

Harmonised Control Centres

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Accelerated Drone Management

Frequentis enables the safe, predictable, and scalable integration of drones and emerging airspace users through a cloud-native UTM framework already deployed and linked with AIM systems. By harmonising crewed and uncrewed aviation, we deliver a unified operational picture that supports both safety and innovation.

Our solutions enable dynamic airspace management, automated mission approvals, and real-time situational awareness, allowing uncrewed operations to scale without disrupting controlled airspace. With live projects across ANSPs and authorities, Frequentis is actively shaping the future of air mobility.

Trajectory-Based Operations

Trajectory-Based Operations (TBO) will transform the way airspace is managed by creating a shared, continuously updated plan for every flight that adapts to weather, congestion, and changing conditions.

TBO unites ANSPs, airports, and airspace users into a more predictable, collaborative network where airspace is used more efficiently and disruptions can be mitigated before they propagate. Frequentis supports the move to TBO through a modular and service-oriented ecosystem, fully aligned with ICAO's FF-ICE concept and SESAR principles. Through operational deployments and active engagement in global R&D, Frequentis is helping shape a future where the entire sky operates as one connected system, predictable, coordinated, and united by shared trajectory information.

A unified ecosystem

With one of the world's most comprehensive ATM portfolios, Frequentis supports the entire air traffic chain, including communication, tower and centre automations, ATM networks, surveillance, information management, and UTM. These capabilities are delivered as part of a connected, interoperable ecosystem that enables them to work together seamlessly.

At the heart of this evolution is MosaiX, our operational digital platform, which standardises security, automation, lifecycle management, and data exchange across applications, enabling true service-based operations in safety-critical contexts.

Each new generation of Frequentis products brings deeper integration, stronger automation, and greater alignment with the service delivery model and global ATM modernisation initiatives.

OneATM is therefore much more than a vision for the future of ATM; it shows how Frequentis already delivers technology today and provides a strong foundation for the demands of tomorrow.


Users
Harmonised HMI services
Automation
Voice
Traffic optimisation
Information mgmt.
Surveillance
Networks
UTM
REC
Recording
MosaiX
Infrastructure

FREQUENTIS

Further information

FREQUENTIS AG
Innovationsstraße 1
1100 Vienna, Austria
Tel: +43-1-811 50-0
www.frequentis.com

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