



# Air Traffic Management (ATM)

Keeping 3 billion passengers safe each year

Proven industry experience

Deep commitment to innovation

Strong partnerships drive growth

Air Traffic Management

**FREQUENTIS**

FOR A SAFER WORLD

# Helping aviation meet new challenges

A prospering aviation industry is an important contributor to economic success. Aviation contributes to 2.7 trillion USD in GDP worldwide, and employs a workforce of 62 million individuals. Building on 70 years of experience in ATC, Frequentis Air Traffic Management (ATM) helps Air Navigation Service Providers (ANSPs) worldwide deliver safer and more secure capacity for airspace users in a cost-efficient way.

Innovation is the company's driving force: As the first vendor to offer ED-137 end-to-end VoIP, the first to develop electronic flight strips and the first to bring software-defined networking to ATC, Frequentis ATM continues to create solutions for meeting the requirements of a changing world. Embracing digitalisation, virtualisation and innovation, these solutions are an essential enabler to lead today's ANSPs through future evolutions of their infrastructure and business models.

## Proven experience

The Frequentis portfolio for safety-critical ATC control rooms is based on decades of serving the industry with reliable and proven products.

They set the benchmark across the industry in terms of performance and reliability.

More than 90 percent of the world's airline passengers are managed using Frequentis ATM technology.

## Innovating the future

New technologies have the potential to enhance ATM operations and define a new digital ATM ecosystem: Intelligent networks, deep learning, artificial intelligence, virtualisation and intelligent digital technology platforms.

Frequentis is committed to making technology innovation safe.

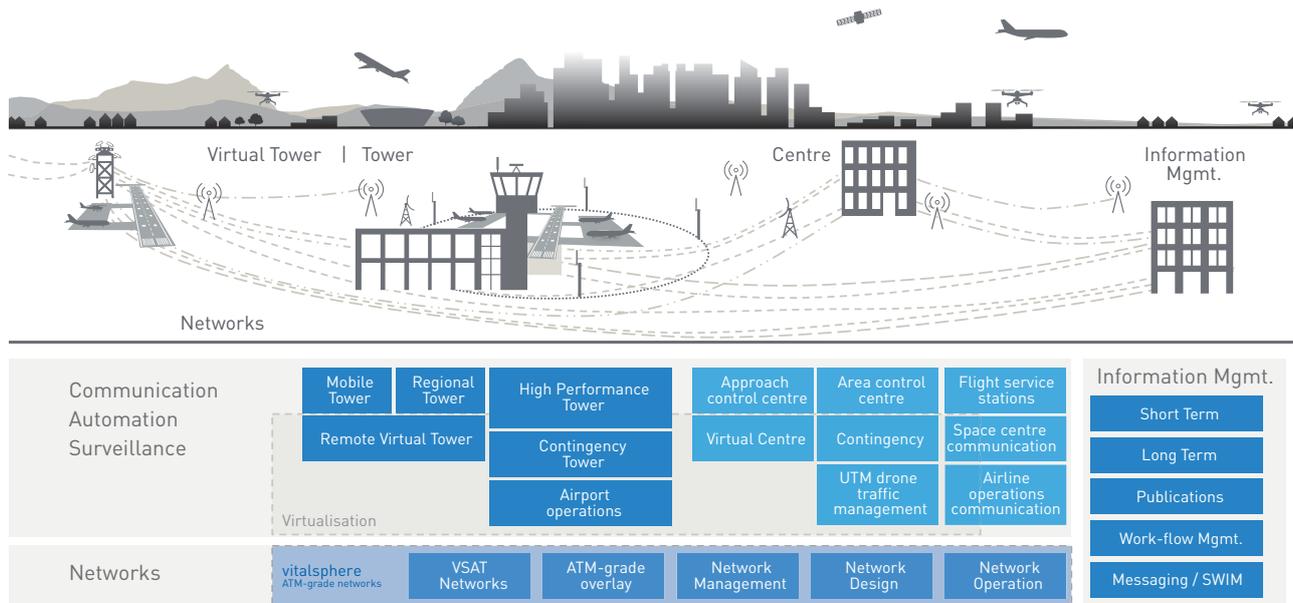
## Partnering for growth

Partnerships, collaborative research efforts and open standards ensure a more automated, cost-effective and productive ATM landscape.

As a member of SESAR, partner for NextGEN, and an active contributor to ICAO, CANSO and other global organisations, Frequentis is helping aviation stakeholders use airspace more effectively.

# Managing change in ATM

The ATM industry is changing: While air traffic continues to grow, market liberalisation and privatisation will continue. New entrants into the airspace such as drones, high-altitude platforms and increased space traffic, will spur new services. Frequentis actively shapes the future of aviation by creating a united aviation ecosystem.



## VoIP voice communications

The Frequentis VCS3020X voice communication solution sets the benchmark among controllers. Trusted and proven worldwide, the company shapes industry standards and innovates with safety in mind.

## ATC Tower

Tower communication and automation solutions for enhanced situational awareness. Highly integrated and modular, they enable airports of any size to address diverse needs: from targeted technology upgrades to enable digitalisation through the strategic replacement of the entire tower system.

## Remote virtual towers

Increasing safety and productivity of aerodrome ATC operations through digitalisation and virtualisation. Advanced video processing with machine intelligence, deep learning and artificial intelligence make airports of any size smarter.

## ATM-grade networks

Leading the way in the intelligent routing and control of ATM network traffic by providing scalable, secure and reliable application-aware networks with situational awareness.

## ATC Centre

ATM operations need to react to changing market dynamics and new entrants. New technologies are pushing the boundaries and permit new concepts of operations: IP-based communications, virtualised ATC services, and drone traffic management (UTM).

## Information management

AIM is a product portfolio to ensure interoperability along the digital aeronautical data chain, boosted by System Wide Information Management (SWIM), which is an integral component of the digital transformation in aviation. It allows for a better sharing of information and better-informed decisions.

# Partnering for stronger solutions

Frequentis continues to develop new partnerships and drive interoperability initiatives that help our customers to build, maintain and evolve comprehensive ATC landscapes. Joining forces with Frequentis Comsoft allows for the integration of surveillance technologies such as ADS-B, MLAT and ARTAS. Frequentis DFS Aerosense provides an end-to-end turnkey offering for remote towers, through best-in-class operations expertise mixed with tested and proven products. The UTM landscape is addressed together with Altitude Angel, providing leading-edge solutions converging UTM and ATM.

## SESAR and NextGEN

As member of the “Single European Sky” programme and partner in FAA’s NextGEN programme, Frequentis is driving the transformation of air traffic management, delivering enhancements in safety, capacity, security and cost-efficiency.

## ICAO ASBU ready

Contributing to the ICAO Aviation System Block Upgrades framework ready for Block 0, delivering Block 1 technologies and progressing to Blocks 2 and 3.

## Interoperability

Working with industry bodies responsible for setting standards, such as EUROCAE, RTCE and OGC, to promote greater interoperability, for easier integration and operation of multi-vendor solution elements.

**1st** Virtual centre worldwide 

**1st** ED-137 end-to-end IP voice communication 

**1st** Deployed software defined networking (SDN) in ATM 

 **3B** passengers  
fly safely with Frequentis every year

 **300+** ATM customers worldwide

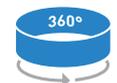
 **130+** countries

 **>25,000** working positions  
**>2,500** VoIP positions  
largest number of VoIP positions worldwide

 **100+** automation systems  
largest installed base worldwide

 **Market leader in VCS**  
30% market share

 **260** VOIP workstations (largest air/ground VCS)

 **360°** high-resolution infrared remote virtual tower

 **World’s largest** electronic flight strips system

**2015** SESAR SWIM Master Class Award

**2016** IFATCA Technical Award

**2017** IHS Jane’s ATC Technology Award

**2017** ATCA Annual Industry Award

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