Air Traffic and Navigation Services SOC Limited (ATNS) provides air traffic, navigation, training and associated services within South Africa. ATNS is responsible for Air Traffic Control throughout South Africa and a large part of the Southern Indian and Atlantic Ocean, comprising approximately 10% of the world’s airspace. ATNS operates from 9 ACSA and 12 other aerodromes. As a globally competitive employer of choice, ATNS is committed to diversity and has achieved ranking within the top ten companies in South Africa with regards to female representation at executive levels.

Our vision
To be the preferred supplier of Air Traffic Management solutions and associated services to the African Continent and selected international markets.

Our mission
To provide safe, expeditious and efficient Air Traffic Management solutions and associated services.

Our services extend beyond Air Traffic Control services into the provision of vitally important aeronautical information used for all flight planning purposes, as well as search and rescue coordination activities and the maintenance of a reliable navigation infrastructure.
WHAT IS FLIGHT PROCEDURE DESIGN AND CARTOGRAPHY?

The aviation industry has potential for growth and is an industry in which safety is paramount. Ensuring high standards of safety while working towards sustainable growth requires expert, well-structured planning coupled with world-class knowledge management.

Flight Procedure Design allows for each phase of an aircraft’s flight plan to be designed according to specific criterion and protected through obstacle analysis and appropriate clearance altitudes to provide the safest, most efficient instrument flight procedure possible. The full design is then translated into a usable instrument flight procedure chart overlaid on accurate map information.

Flight procedures include:

- En-route Procedures
- Standard Instrument Departure Procedures
- Standard Instrument Arrival Procedures
- Instrument Approach Procedures
  - VOR/DME
  - ILS CAT I/II/III
  - RNAV/GNSS
  - APVI/II
  - LPV
  - BAROVNAV
  - RNP AR
  - A-RNP
  - GBAS
  - SBAS
Aviation navigation is quickly moving towards **Performance-based Navigation (PBN)**, and Flight Procedure Design and Cartography are an essential component in driving this ICAO initiative.

PBN defines **performance requirements** for aircraft navigating on an **ATS route, terminal procedure** or in a **designated airspace**. It is ICAO’s effort and objective to **redefine** the regional differences of various Area Navigation (RNAV) and Required Navigation Performance (RNP) specifications into a **globally harmonised** set of PBN applications.

Working in conjunction with Airspace Design, Flight Procedure Design allows ATNS to take into account the **technological capabilities** of each individual aircraft, the **prevalence** of satellite-based navigation aids versus ground-based navigation aids and additional factors to **increase the scope** of safe navigation and implementation of PBN.

This allows ATNS to offer consultation services to other Air Navigation Service Providers (ANSPs) for Flight Procedure Design and Cartography services, facilitating the **implementation** of PBN in line with the **ICAO PBN Roadmap**.

**Features of Flight Procedure Design include:**
- Non-precision Instrument Approach Procedures design or verification, including Global Navigation Satellite System procedure (e.g. VOR/DME, NDB, Localiser and GNSS)
- Precision Instrument Approach Procedure design or verification (e.g. ILS)
- Approaches with Vertical Guidance (e.g. SBAS/BAROVNAV)
- Standard Arrival Route (STAR) and Standard Instrument Departure (SID) Procedure design or verification
- Air Route (including RNAV) and Airspace design or verification
- ICAO Annex 14 Obstacle Evaluations
- Obstacle and building restrictions on and in the vicinity of airports
- Aviation consulting relating to procedure and airspace design
ATNS provides a full spectrum of design capabilities, from conventional non-precision approach charts, precision approach charts, standard arrival and standard departure charts through to GNSS and RNP instrument procedure charts. Furthermore, all charts as defined in ICAO Annex-4 can be provided. These include, but are not limited to, Aerodrome, Aerodrome Obstacle Type-A, Parking and Docking and En-Route charts.

**BENEFITS OF FLIGHT PROCEDURE DESIGN AND CARTOGRAPHY**

- Enhanced efficiency
- Fuel savings
- Reduced track miles
- Reduced CO₂ emissions
- Increases in capacity
- Reduction in noise pollution
- Increased safety
- Frequency time elimination
- Enhanced predictability
- Reduction in radio transmissions
Flight Procedure Design and Cartography are critical to the implementation of PBN. ATNS has upgraded software systems to state-of-the-art world-used software and increased staff numbers to provide the most efficient and up-to-date service available.

ATNS has included the latest regional navigational specifications as determined by the International Civil Aviation Authority, and is exceeding the regional PBN targets.

At King Shaka International Airport, ATNS has successfully implemented a purely satellite-based navigation system, completely independent of conventional navigational aids.

OTHER SERVICES OFFERED BY ATNS

- Aeronautical Information Management
- African Regional Monitoring Agency Services
- Airspace Design
- Billing and Collections Management
- Central Airspace Management Services
- Education and Training
- Engineering and Technical Services
- File2Fly
- Maintenance Management System
- NAFISAT and SADC VSAT
- Safety and Regulation Assurance
- Upper Airspace Service Provision
- Risk, Security and Quality Compliance Services
- WGS-84 Surveying and Obstacle Evaluation
OUR SATISFIED CUSTOMERS

- Airports Company South Africa (ACSA)
- Angola (ENANA)
- Cabo Verde Air Navigation Service Provider (ASA)
- Cape Verde CAA
- DRC CAA
- Lanseria Airport Management
- Lesotho
- Mozambique CAA
- MTN
- Namibia CAA
- Richards Bay Municipality
- SA Express Airlines
- South African Civil Aviation Authority (SACAA)
- United Nations
- VODACOM

Contact us

ATNS head office
Telephone: +27 11 607 1000
Fax: +27 11 607 1570
www.atns.com

Physical address
Eastgate Office Park
Block C
South Boulevard Road
Bruma

Postal address
Private Bag X15
Kempton Park 1620
Gauteng