

Pans Ops Specialist

By Gina Hartoog

Have you ever flown from Jozi to Cape Town? Perhaps New York to London? Pilots don't fly haphazardly across the skies – their routes and procedures are pretty much mapped out. At take off the pilot is given a 'procedure' by the air traffic controller. He or she selects this procedure on the system and the plane is directed to follow the prescribed path. On landing, another procedure is selected and the plane is brought down safely on the runway.

Highways in the sky

Met Tumelo Monezi, a pans ops specialist (flight procedure designer) at the South African Civil Aviation Authority (SACAA). Pans ops specialists are responsible for creating the procedures that a pilot uses to navigate his or her aircraft safely from point to point. Flight management systems (FMS) the computer systems onboard aircraft, are regularly updated with new procedures.

Tumelo explains: "In the most basic terms, the pans ops specialist designs three-dimensional highways in the sky which guide aircraft safely to runways of various airports using satellite navigation and ground-based navigation facilities."

In most cases, pans ops specialists start their careers in other areas of aviation, perhaps as a pilot or an air traffic controller. Tumelo worked in air traffic control in the SA Air Force at AFB Ysterplaat in the Western Cape. He later moved to the CAA as an investigator for aircraft accidents. "I was later given the opportunity to train further as a procedure designer," explains Tumelo. "I completed my training first in the United Kingdom and then in Singapore." Once initial training is complete, the designer needs to complete practical training under supervision. This can take between one and three years to complete.

Safe air space

Love Mathematics? Nuts about Trigonometry? This career may well be your cup of tea! "You'll also need to be able to follow processes and be conscientious about documenting every part of your design with an appropriate paper trail," says Tumelo. "You must be a good communicator and be analytical in your thinking."

Although deadlines for projects may loom, the designer knows that safety aspects are critical. There is no room for error. He must check and re-check his designs and, once a procedure is complete, it's passed on for approval and verification. In the final stage, the procedure is passed on to a cartographer who draws a physical chart of the design.

Pans ops specialists spend most of the day behind the computer working on flight procedure design software and

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Quick facts

Salary

Starting around R360 000 per annum (R30 000 per month) upwards (good opportunity to earn US dollars overseas)

Qualifications

A first qualification and experience in the aviation industry before moving into pans ops design with additional courses and practical on-the-job training

Working hours

Office hours (overtime to complete projects/meet deadlines)

Places of Employment

Exclusive to aviation industry - CAA, ATNS, NATS, international aviation organisations

CAD programmes. There is an opportunity for international travel for training (the courses are only offered at international venues) and also visiting airports within the country to get a physical look at the layout.

Always flying high

The aviation industry is very small and jobs in flight procedure design may not be many, however, opportunities for development in the career do exist at an international level. While there may be plenty of pressure and critical aspects to consider, Tumelo says it's a good feeling to fly in a plane and know you designed that particular procedure. "The real prize is when a pilot let's you know that a particular procedure was well-designed and works nicely," he says.

A job well done is something Tumelo always strives for. He says that in any aspect of one's life, one should aim to be the best. "Don't aim just for that pass mark," he says. "Aim to be the best you can be. It really makes no difference as to what avenue you take, but striving to do your best in everything will make you successful." ■

Similar Careers

Aeronautical engineer, air traffic controller, aircraft avionician, cartographer, flight engineer, navigating officer, pilot

Subject guidelines

Mathematics
Physical Sciences
Geography

Contact your training institute for more specific information

Places to study

A first qualification and experience in the aviation industry before moving into pans ops design with additional courses and practical on-the-job training. As Tumelo points out in the article, in most cases, pans ops specialists start their careers in other areas of aviation, perhaps as a pilot or an air traffic controller.

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