

SIA Solutions's automated weather observation system takes Lanseria to next level

Better data enhances airport safety, increases business pull

SIA Solutions, the airports and aviation high-tech Company, has lifted Lanseria Airport's safety rating and increased its attractiveness as a Gauteng airport of choice, by implementing an automated weather observation system (AWOS).

The AWOS will improve the accuracy of Lanseria's weather data, which will increase aircraft safety and inform weather forecasting for the airport by the SA Weather Service (SAWS), says Ntsane Kolisang, marketing manager for SIA Solutions. SIA is a 60-40 joint venture between technology leaders Tellumat and Harambe Technologies.

Mike Christoph, Lanseria Airport operations manager, says Lanseria's existing analogue system had reached the end of its life and needed an upgrade to comply with SA Civil Aviation Authority standards of accuracy and safety. The airport issued an open tender calling for an AWOS.

The AWOS system would allow Lanseria to give incoming pilots better weather data, he says. "When you undertake a 12-hour flight to land in another country, you want to be sure what the weather will be like 12 hours from now. A pilot may decide to take the aircraft elsewhere if he or she isn't satisfied they're getting the right information."

Kolisang says SIA entered a proposal for a Vaisala AWOS system consisting of a number of land-based weather sensors at the airport, to observe conditions across a number of variables. In a full-service system, these include wind direction and speed, barometer pressure, cloud height, humidity, light, runway conditions, temperature and dew-point.

Christoph says the system chosen by Lanseria was basic but fully upgradeable, as some sensors are only required if an airport has certain other equipment. For instance, if Lanseria had instrument landing and distance measuring equipment for incoming aircraft, the AWOS would need cloud height sensors.

The sensors were linked via 1 700 metres of fully-redundant (full-duplex) fibre optic cabling, to a central data unit for processing and PC display in specified formats.

SIA's tender was successful, says Christoph, because it offered a turnkey solution at a competitive price. SIA's good track record of operating airport systems, its portfolio of rollout skills and its history of airport technology maintenance at Lanseria also came into play. It was further to SIA's advantage that it has extensive experience in fibre optic communication links.

Vaisala is the incumbent provider to South Africa's airports operator, and the prevalence of its equipment in South Africa meant the easy attainment of spares and servicing.

Kolisang recalls that the implementation took no longer than two months, and was challenged only by the rocky topography of the terrain. "Much of our time was spent doing civil work to laying cables," he says. "This we had to resolve, while meeting

compliance targets.” In keeping with SIA’s principles of empowering people, a combination of manual and power trenching completed the work on time.

Christoph says Lanseria management and staff received the system enthusiastically and experienced no trouble learning to operate it. Did it do the job? “Yes – it is of great help to traffic controllers.” He says the old system consisted of a number of dials that had to be watched constantly. The new system offers a highly customisable computer interface, with powerful history and averaging functions to track safety conditions within a time context.

With a job well done, Christoph says SIA will in all likelihood be a preferred provider when upgrades are undertaken as the airport grows. Meanwhile, the company has been contracted to maintain the system, to calibrate it and see to its licensing.