



TEL-AVIV BEN-GURION INTERNATIONAL AIRPORT (TLV)

CASE STUDY: FODETECT IDENTIFIED PEELED TIRE ON THE MAIN LANDING GEAR DURING TAKE-OFF, AIRCRAFT RETURNED FOR A SAFE LANDING, JUNE 4TH, 2017

THE CUSTOMER

Israel Airport Authority (IAA); TLV Airport.

TLV airport is the largest international airport in Israel. In 2017, the airport hosted nearly 21 million passengers, most of them international passengers (20 million) and over 136,000 movements.

BUSINESS NEED

TLV airfield has a unique almost triangle runway layout including runway intersections, resulting in complicating airfield operations. The TLV safety division understood that the runways could be managed more efficiently. The division decided to look into acquiring advanced technologies in order to improve runway safety and operational efficiency.

THE CHALLENGE

Maintaining a clear and safe runway for operations is a challenging task. With as frequent as an aircraft movement every 60-90 seconds in peak hours, airport staff cannot manually inspect the runway between every takeoff and landing. Night and limited visibility conditions such as fog and rain make the challenge even harder.

XSIGHT SYSTEMS' SOLUTION

RunWize™ by Xsight Systems is a comprehensive runway management solution enabling improved runway safety, capacity and operational efficiency.

With sensors collocated with runway edge lights, RunWize utilizes a combination of millimeter wave radar and image processing to best detect FOD, birds, wildlife and monitor runway condition and activity.

Since commissioning in January 2013, an average of 5.5 hazardous FOD, including birds, metal and plastic objects, have been retrieved per month; Runway inspection procedures have been modified and became more efficient, minimizing runway closure times; The runway is always viewable and events are recorded for further investigation.

THE INCIDENT

On June 4th 2017, EL AL Boeing 747-400, took off from Tel Aviv (Israel) to New York (USA).

During the initial climb, the crew detected a loud noise and vibrations from the area of door 23, but could not locate their source.

The FODetect system at Ben Gurion International Airport detected foreign objects on the runway and alerted on the matter five times.

A crew was sent to the site and found several large tire parts on the runway in zone W4. The tire parts were identified as belonging to the aircraft that had just taken off.

The pilots were updated by the Control and after about 75 minutes of flight a decision was made to return the flight to land for fear of structural damage to the aircraft.

The findings of the inspection conducted of the wheel: The incident occurred due to the wheel rolling over a foreign body, most likely an object such as a wheel nut, that penetrated the rubber.

TIME LINE

- 01:13 Aircraft take off.
- 01:14 TLV's operator received five FOD alerts by Xsight's FODetect.
- 01:26 The last tire part was collected and last alert was closed.
- 04:00 The aircraft landed back safely on Runway 26.

THE IMPACT

- > **The Pilots were unaware** the tire was damaged, and were notified using the system's ascription.
- > **All FOD were quickly retrieved** with only 12 min. runway closure time.
- > **The operator's investigation result** allowed the pilots to make the optimal decisions to ensure safety of the aircraft and it's passengers and return to landing.
- > **Following aircrafts** were assured a clear runway for safe operations.
- > **The incident was fully investigated**, based on FODetect data including FOD images & locations analysis.

