Case Study

Aviation
Cobalt Ground Handling

The Provision of Joined Up Technology Solutions for Airside Operations Support

- Improve efficiencies
- Save time
- Reduce costs
- An accountable compliance structure

COBALT™

foresolutions

Key Customer Requirements

- More robust communications
- A system not reliant purely on voice
- Compliance standard evidence capture for aircraft service and turnaround procedures
- Asset tracking for more efficient operations
- Vehicle cameras for improved safety & accountability

Choosing A Provider for Aviation Airside Operations Support

Cobalt Ground Solutions is a major ground handling operator based out of Heathrow Airport. Initially looking for an upgraded radio solution, Foresolutions Ltd was invited to provide a proposal for a new communications solution. However, early on in objectives gathering sessions it became apparent that our capabilities as a multi-faceted technology and innovation partner offered a much larger opportunity for Cobalt to improve safety, compliance governance and airside operational efficiency.

Wider Technology Experitise, Scope & Integration Possibilities

After extensive discovery workshops enabling us to fully understand the operating and customer challenges, we identified clear areas where our solutions could be deployed to:

- Improve efficiencies
- Save time
- Reduce costs
- Introduce a more robust compliance structure

Our Approach

We addressed this by combining technology to one device and system to turn around a plan for digital evidence capture with a GPS stamp to move away from the manual paper/clipboard model.

The new solution replaces Cobalt's old two way radio set-up with a more reliable, efficient network of PoC devices. This led to a larger project encompassing asset tracking, a new digital aircraft safety check application and vehicle cameras. Read on for full details on each aspect of the solution.

Increase workforce and workflow agility

Client Overview

Cobalt provides a full spectrum of ground handling solutions for airlines seeking high quality ground services at London Heathrow Airport. They put ultimate focus and consistency in safe, on time departures, while integrating all aspects of ground handling to deliver a professional and efficient service to their airline clients and their passengers. The business has a team of around 800 staff, and have a vast amount of expertise in ground services at London Heathrow Terminals 2, 3 and 4, where they have been operating since 1996, with airline self-handling experience before that.

Client Objectives & Current Status

Cobalt was keen to upgrade its current communications infrastructure to a provider who could offer them a wider capability as a true systems integrator.

The current picture was as follows:

• Traditional users of analogue trunked radio

• MPT1327 system provided by a previous radio supplier

Wish List:

• Keen to step away from radio but use a robust and mission critical system that was modern and not reliant on purely voice communications

• They had a need to take pictures of aircraft on arrival and departure as a KPI in their new contract with a major airline

• They wanted the ability to have a device that would be able to use applications that they may like to use in the future

• They needed the device to be able to withstand the very harsh environment of the Ramp at LHR

Push To Talk Over Cellular (PTToC / PoC) Radios

Sonim XP8 ultra-rugged device with a 3 year 'no—quibble' warranty, also an android platform for future-proofing

Zebra WFC – cellular push to talk software (PTToC) – we selected this for it's reliability and resilience from a software platform

The original solution was to use Zebra WFC to MMS pictures back to the server for manual storing and auditing.

Subsequently the client asked us to write a specific application to work on the android devices - see p3

How does PTToC Work?

Rather than conventional two-way radios with repeaters and infrastructure that just cover a local but wide area network, like a two-way radio, with PTToC you push the button to talk, but the devices are more like phones. These devices operate over all of the mobile phone networks and the local Wi-Fi, giving the customer national coverage, over the air programming and an android operating system that enables them to use their suite of management apps on one device.

The Hardware

The devices of choice were the Sonim XP8 - a ruggedised smart phone that's build to last. Serving, protecting and providing for others demands a smart device you can rely on, and the Sonim XP8 is ultra-reliable regardless of situation or environment. This is a web-based form that logs user, location, terminal & stand number, flight number and comments

It also enables the user to take pictures and upload them with the above information.

The Software

Zebra Work Force Connect (WFC) was selected from a number of cellular push to talk providers as it offers a robust and resilient platform that will work in the mission critical environment at LHR. Also, Zebra and Sonim have worked closely together to make sure that the hardware and software are compatible.

Push-To-Talk Over Cellular
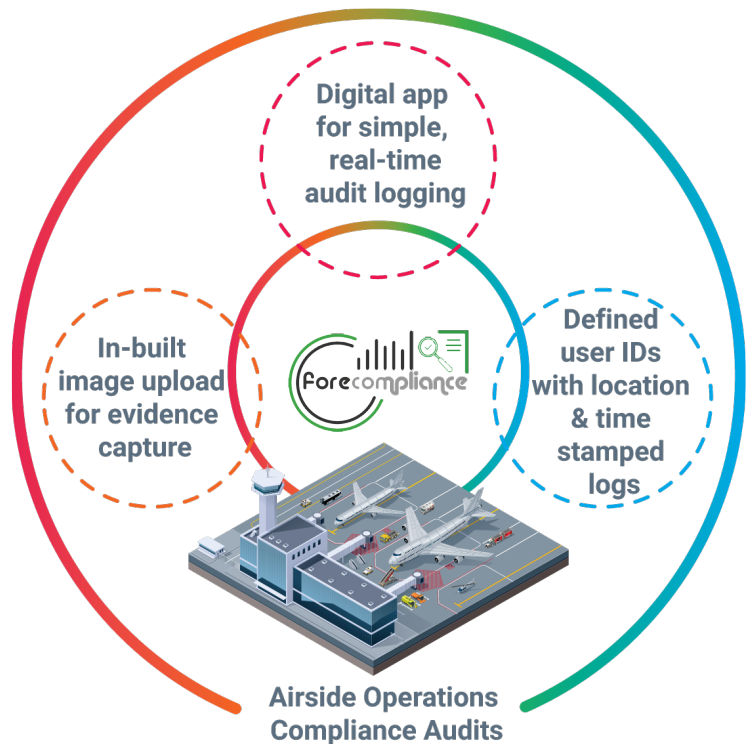
Case Study

Aircraft Checks

The Solution - Audit & Evidence Capture With Forecompliance

A new bespoke application for the Aviation sector

To meet Cobalt's requirement to provide user and time stamped evidence capture of all the processes taking place to enable arrival and departure, we developed Forecompliance.

This is a web-based app that logs user, location, terminal & stand number, flight number and comments.

It also enables the user to take pictures and upload them with the above information.

Digital app for simple, real-time audit logging

In-built image upload for evidence capture

Defined user IDs with location & time stamped logs

Airside Operations Compliance Audits

Mobile App Based Audit Template & Full Dashboard

- User accesses the Forecompliance app on their mobile device.

- User, location and time information will populate automatically, mitigating risk of incorrectly logged data and making it easier to find any CCTV/security camera footage in cases of incidents.

- Type of audit, terminal & stand categories are pre-programmed for your airport.

- Photographic evidence of aircraft/asset status and condition are captured from the mobile device by selecting the upload images command. The user can then add a comment.

- Upon submission, the audit report is filed and time stamped against that user ID on the Forecompliance cloud based platform.

- User access is set for ground staff and supervisors/managers for various levels of audit access and visibility.

- See all audits at a glance, filter by date, airline, terminal, audit type and much more

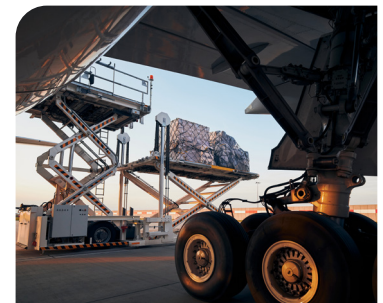- Fully exportable as an Excel, CSV or PDF file

The Solution - Foretrack Connect

Cobalt have also opted to install trackers in their airside assets to enable them to benefit from better operational efficiency. The motorised vehicles have also been fitted with cameras to enable enhanced safety and accountability for drivers and all airside personnel.

Key benefits:

- Ground staff can find the kit I need quickly and easily

- Easily check if kit is being stored/returned to the correct location at the end of a job

- End of shift/day – check if the kit is on charge so it's serviceable and doesn't cause any delays for the next shift

- Everything is categorised so you can quickly see how many of each asset are accessible

- User is in control, real-time visibility in the app via desktop or mobile

- Driver safety: decrease the risk of incident and subsequent investigation

- Damage records – provides clarity of no-fault or culpability resulting in less stress for individuals under investigation and quicker resolution of incidents

- Training opportunities using real footage of the working environment

Safety & Behaviour

Show 25 Entries | Facade Hoists Devices | Device | All Days | 14/04/2023 - 20/04/2023 | Export | Column Filter | Filter | Search

Device	IMEI	Trips	Total Driving Hours	Total Miles	Idle Time	Over Speed	Accel	Braking	Cornering	Others	Collision	Total Safety Events	Safety Score	Actions
G2 FHL (IG)	867322035632025	24	00:12:59	311.93	0.00	0	0	0	0	0	0	0	100%	
WT66 FLW	867322035607969	4	00:00:41	17.40	0.00	0	0	0	0	0	0	0	100%	
WA672GS george	357073294666769	7	00:06:08	245.44	0.00	1	0	0	0	0	0	1	100%	
S8 FHL	350317171699642	19	00:14:31	329.95	0.00	8	0	0	0	0	0	8	99%	
S9 FHL (SS)	867322035607878	31	00:16:04	495.85	0.00	5	4	0	0	0	0	9	99%	
R 9 FHL (AR)	868997039539265	22	01:13:22	364.74	0.00	9	8	9	0	0	0	26	99%	
T8 FHL (TC)	357322043670956	38	00:11:52	275.89	0.00	4	4	2	0	0	0	10	99%	
S10FHL (ST)	353322083100769	13	00:04:27	128.62	0.00	2	2	1	0	0	0	5	99%	
B9 FHL	868997039405426	18	00:07:13	170.26	0.00	3	7	0	0	0	0	10	99%	
K9 FHL(KT)	359006056548609	25	00:15:24	334.92	0.00	8	21	2	0	0	0	31	98%	
		201	05:06:45	2,675.00	0.00	40	46	14	0	0	0	100		

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Vehicle Cameras

Motorised Vehicle Camera Solutions

The addition of vehicle cameras has added another layer of visibility, control and accountability to Cobalt's entire airside operation. This and every other aspect of our fully integrated aviation solution is easily accessible and manageable from each user's hand-held device.

- Video, tracking and telematics solution.

- Cloud based portal with up to 4 live camera streams.

- Geofencing to help locate and control motorised vehicle deployments and monitor movements.

- Improved safety, evidence capturing, training material and accountability for operators.

"We chose Foresolutions as our new communications and tracking provider, as they have a solid background in Aviation expertise and a wide scope of device-agnostic options. Initially we needed an upgraded communication system to replace our existing two way radios which were often patchy and unreliable.

As a true systems integrator, their proposed solution of a new PoC radio set up that was not solely reliant on voice, opened up so many more opportunities to create a multi-functional set up that also met our requirements to have a robust, digital audit trail solution for logging the movements around the aircraft.

Now all our work is documented with live images that have a user and time stamp that protect us from any potential unfair damage claims. We've gone on to commission a new camera tracking project for our critical airside vehicles to improve safety and operational efficiency. All our assets now have live location tracking so all employees can find and use the nearest one, supervisors can accurately monitor utilisation. The team at Foresolutions have been knowledgeable, flexible and responsive to our needs. I would wholeheartedly recommend them to anyone looking to take the next step in their tech journey."

Ben Cordingley, Head of Operations, Cobalt