

### CASE STUDY

### NATIONAL AIR TRAFFIC SYSTEMS (NATS)

Barron McCann employs some 170 specialist Engineers in its Workshop, Project Infrastructure and Deployment Services (PIDS) and Customer Services (CS) Divisions.

PIDS core engineering capability and knowledge can be harnessed by focused training and Project Management, in order to deliver the most demanding and unique projects.



#### THE REQUIREMENT

NATS is a global leader in innovative air traffic solutions and airport performance, providing air traffic control services for aircraft flying across 2.5million miles of UK airspace and the eastern part of the North Atlantic.

- ▶ The company's business is regulated and operated under licence from the Civil Aviation Authority.
- ▶ The guiding principle of air traffic control is that safety is paramount. Controllers must therefore keep the aircraft they handle safely separated using internationally agreed standards.
- NATS is responsible for two million flights and 220 million passengers a year. It has two operations centres, at Swanwick in Hampshire and Prestwick in Ayrshire, and also provides air traffic control services at 15 major UK airports and Gibraltar.

Every day across the globe, 60% of the world's commercial air traffic and 80% of the world's managed oceanic airspace are monitored and controlled by Lockheed Martin air traffic control systems. Since 2001, Lockheed Martin has worked with NATS in order to deliver a modern air traffic control system – largely required to support the ever-growing volume of traffic across the UK.

The delivery of specialist projects to tight technical specification, timescales and budgets is a demonstrable Barron McCann capability that can be delivered across any market sector.



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By 2006, the project had reached a significant milestone – requiring a hardware re-platform in order to significantly extend the life of the system. The objectives of the re-platform were to add enhanced capabilities, greater flexibility and functionality, whilst creating a contemporary look and feel as flat panel displays and smaller, yet more powerful, processors were installed.

Aware of the significant manpower and technical skillsbase required to deliver the project, Lockheed Martin approached IT project specialists Barron McCann.



A total of some 300 workstation units needed to be replaced, re-cabled and rigorously and systematically tested as systems were moved from the old to new platforms, and from "test" to "live" environments. It was made clear from the outset that "air traffic control is a 24x7 operation every day of the year" – there could be no downtime at Swanwick!

The first step involved a pilot project of upgrading just a few systems to provide training rigs for Barron McCann's engineers. Systems were dismantled from the live environment, and transported to Barron McCann's Technical Training Centre in Derby in order to devise an appropriate training regime and environment.

Having been trained in-depth on the particular requirements of the Lockheed Martin system, engineers then spent three months working around the clock to install the new platforms and specialist ancillary equipment. Twelve engineers worked days and nights replacing the systems, using core engineering skills tailored to the unique requirements of the air traffic environment, and supplemented by precise terms of reference, and rigorous review and testing.

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### THE RESULT

"The re-platform project added enhanced capabilities, greater flexibility and functionality. The fact that this work was completed on time with no problems is proof that Barron McCann engineers possess an impressive combination of the right skill-sets and expertise."



Doug Morrison, Project Manager at Barron McCann, said: "This was a truly bespoke requirement, and we rose to the challenge of a detailed engineering solution thanks to our cross-industry systems engineering expertise, and a strong and enduring partnership with Lockheed Martin.

This was another example of how World-leading organisations call upon us to deliver the most demanding and unique projects through high-level project management using core engineering capability and knowledge."

This was a mission-critical situation. In air traffic control nothing can be left to chance so it was vital that Barron McCann's highly-experienced engineers understood the business requirements and worked in partnership with Lockheed Martin and NATS."

MARK COOPER Lockheed Martin UK NATS Programme Director