Futura International Airways Case Study

Challenge: To track critical operations information in near real-time and provide accurate performance, weight & balance calculations.
Solution: Implementation of the Flightman™ Electronic Logbook, Performance and Weight & Balance solutions.

"In a hotly contested market, Flightman™ gave us the ability to cut costs and measure costs more accurately while improving service quality and reducing the workload on our staff, thus presenting a very rare opportunity", **Roman Pané, CEO Futura International Airlines**

Introduction

This case study describes the existing processes, the requirements for change, the Flightman™ solution, the implementation project and the benefits for Futura through the use of Flightman™ across the entire fleet. It also illustrates how AMT works in close partnership with customers to deliver tailored, cost-saving solutions for process management through effective data capture and control.

Futura International Airways

Futura International Airways was founded as a passenger charter airline by Aer Lingus, the Irish flag carrier, Belton Air and a number of small investors on 17th February 1990. Today Futura is 80% owned by Futura Management.

To date Futura has flown more than 200,000 hours and carried more than 12 million passengers, serving more than 60 cities worldwide. With one of the newest fleets in the market, the average age of Futura aircraft is five years (eight Boeing 737/400s and seven Boeing 737/800s). The airline's main operational hub is Palma de Mallorca, in addition to other bases at Tenerife, Las Palmas, Arrecife and Malaga.

On 31st May 2002, Futura was certified by the Spanish *Dirección General de Aviación Civil*, a member of the JAA, as an operator meeting the requirements prescribed in R.D.220/2001, 2nd March and JAR OPS 1.

Customer Requirements

Futura required the implementation of a mobile-based aircraft technical data log Management System (MMS). The solution had to address the following functional areas:

- Takeoff and Landing Performance Calculations
- Load Sheet (Weight & Balance) Calculations
- Voyage and Crew Duty Report (documenting flight details in areas such as fuel uplift, cargo, passengers, transits, ground services, crew, delays, landing, etc.)
- Airport Directory and Costs
- Captain's generic reports
- Fuel consumption analysis

Pre-existing Processes and Systems

The main pre-existing systems in Futura were:

- SKYOPS: a customised client-server Windows application for Operations Management, built in a 4GL environment with a Web gateway.
- FINAIR-Navision Financials: a version of the standard Navision Financials ERP package, customised for an airline.

- Commonly-named “AS/400” applications were in use across most functional areas of the company. Although scheduled for migration to other environments, these applications still had a considerable lifespan.

The process of capturing and disseminating Flight Operations information during turnaround was primarily based on paper forms. These forms were filled out by hand by crew during flight and sent via representative agents to the company’s offices by fax or through the internal mail system. There were no information systems on the aircraft that could support the automation of this process.

Existing systems did not support the communication of data in real time from the flight crews and it took an average of 2 days for the information to reach the company’s offices. The only exception to this was the receipt of some flight details from representative agents and handling agents directly to the SKYOPS system through standardised SITATEX messages.

Motivation for Change

The principal motivation for change came under the following areas/headings:

- Providing pilots with user-friendly technology to facilitate their tasks in the cockpit (tools for calculations, airport analysis, technical documentation, etc.)
- Reducing the volume of hard-copy documentation in the cockpit (the volume of paper-based information implied a significant cost in fuel consumption and considerable effort and inconvenience in keeping all the documentation up to date)
- Improving communications between different departments in the company, using GPRS and the Internet. The combined use of these technologies enable the following:
    1. Pilots can send flight information and flight reports directly to the company during the aircraft turnaround cycle, thereby streamlining the flow of data from the aircraft and avoiding the repetition and error margin of manual data input.
    2. Client server technology in the cockpit opens up numerous possibilities in the area of data capture and communication to the technical and maintenance teams in the airline.
- Optimising flight operations processes: reducing fuel consumption, avoiding segment loss where possible, making more accurate weight and balance calculations, etc.

"In the current international climate it is imperative that airlines cut costs without compromising passenger safety. We are delighted to enter this complete roll-out phase with Futura and we believe that the full implementation of Flightman™ presents the airline with a real opportunity to benefit from substantial cost savings and operational improvements." **Bernard Hensey, CEO, AMT**

Timeframe

Futura required that the system be tested during the 2002 summer season, followed by full deployment across the fleet.

Flightman™ Solution

The Flightman™ solution encompasses three separate items; the actual software solution and ground servers, the Administrative Server and the Reports Server.

Software

The software solution is java and XML based. It runs on hand-held computing devices. Each aircraft in the fleet has its own personal device. The software consists of a series of forms which correspond to the functional area e.g. Segment Crew. These forms are complemented by a series of workflows which talk to the back end database.

ADS

The Administrative Server or ADS consists of a simple web based logon. The user logs in and can then manage the database directly. Updates can be queued to individual devices or to the entire fleet. The changes will be picked up by the aircraft the next time they complete a comms session.

Reports

A series of Cognos reports are also provided by eTechlog. These are accessible through a web based logon. The user can see at a glance what they are interested in.

Project

The need for change to existing processes and systems was discussed at length by the key user groups in Futura. These discussions defined the customer's requirements, which in turn formed the basis for the project.

The project team was made up of many individuals and groups from both AMT and Futura. Futura provided representation from the IT, Flight Operations, Maintenance, Finance, Training and Quality Departments. The success of the project was due in large part to the involvement of these groups.

The Futura IT Department provided additional expertise during the integration phase and managed the project internally. This department's input was important in defining a detailed Requirements Specification, which then formed the basis of the project.

The Flight Operations Department provided detailed information on Futura's fleet operations. This necessary to help AMT understand the modifications and customizations required for the Weight and Balance and Performance Calculations, so that the functionality in Flightman™ mirrored Futura's existing standards and practices. This department highlighted the target areas for cost savings and process improvement. The Flight Operations Department also facilitated communications with the Spanish regulatory authorities.

Futura's Maintenance Department was involved in the project to assist in addressing battery charging and security questions. The batteries for the device were not initially charged using the aircraft auxiliary power as this required a modification to the aircraft. A simple procedure was introduced whereby used batteries were placed in a red bag and fresh batteries in a green bag.
The security of the device on the aircraft is resolved by introducing a secure compartment in the first overhead bin in the cabin; this area is also used to store the back-up device; both devices are stored here overnight. During operation of the aircraft the device is kept in the cockpit.

The Futura Finance Department focused on the cost saving attributes of Flightman™. The principal benefits include more accurate Weight and Balance calculations, take off and landing calculations. Other areas to benefit significantly were fuel uplift monitoring (which reduced fuel tankering) and reconciliation of ground services.

One of Futura's principal objectives in the Flightman™ implementation was the improvement of data quality and consistency. With this in mind, Futura and AMT jointly designed and developed the user interface to enable users to select data from drop-down menus and automatically calculate conversions. Gross error checking ensured the integrity of the data entered and workflow management was improved through a logical click-through process that mirrored existing checklists.

New operations procedures accompanied the introduction of Flightman™ to pilots and crews. Several days' training on the solution and the new procedures was delivered jointly by AMT and Futura to a core group of pilots. This group of pilots also carried out the acceptance testing of the solution, thereby ensuring comprehensive and focused testing and feedback from the target user group.

"Flightman™ proved to be very user friendly and demonstrated real efficiencies for Futura in reducing the amount of labour intensive and often incomplete or inaccurate paperwork and calculations." **Francisco Rodero, Ground Operations Post Holder, Futura International Airways.**