

AVIATION SPECIAL

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FEBRUARY 13 - 2017

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## FLYdocs

INSPIRING A DIGITALLY  
POWERED REVENUE  
SYSTEM FOR AIRLINES,  
LESSORS & MRO PROVIDERS

Adrian Ryan,  
CEO

### IN MY OPINION

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₹150




# FLYdocs

INSPIRING A DIGITALLY POWERED REVENUE SYSTEM FOR AIRLINES, LESSORS & MRO PROVIDERS

By Emmanuel Christi Das

A revolution is taking place in aircraft records management, enabling continuous airworthiness management, impact analysis for component issues and automation of aircraft acquisitions, sales and lease returns. Imagine true compliance on demand with integrated build, maintenance data and electronic authorizations, all opened up by advanced search and analytics capabilities. This may seem tempting, but still, airlines continue to employ on average 3 people per 10 aircraft to manage aircraft records, wherein creating handover documentation takes an average of 26 man weeks. Most airlines employ project managers and teams of records management staff to deliver the take-on of a new aircraft type or high volumes of existing aircraft types. Experts working in this field reveal that it's not an elementary process. Maintenance records get lost;

signatures get missed; component data gets incorrectly transposed; assemblies are poorly prepared – both in terms of back-to-birth traceability, planning for overhaul events and management of structural/repair related requirements; these being few of the shortcomings associated with airline documentation. Visionary engineering departments are turning to specialist airline records management organisations to professionalize the processes and, in some cases, to provide a fully outsourced process. Airlines such as Cathay Pacific, Qantas, Hawaiian, Jetstar and Virgin Atlantic have long term contracts with Staffordshire, UK headquartered FLYdocs to scan all existing aircraft records, manage new build data and integrate all maintenance records on an ongoing basis. Aircraft are becoming exponentially more complex; the criticality of airworthiness management is at its height and airlines' fleets are being renewed at a comparatively faster rate. Yet, both seller



FLYdocs builds and audits documentation for airworthiness requirements and in advance of future aircraft handbacks

Adrian Ryan,  
CEO



and purchaser waste a lot of productive time building & reviewing the handover documentation. This is usually followed by incorporating the records of new aircraft into the fleet management systems and frequently tying up resource and capital for unnecessary weeks. Currently, less than 3 percent of aircraft documentation exists as smart records, capable of being queried, checked and analysed. However, with the right systems and processes, “big data & analytics” techniques could be applied, enabling rapid analysis of component issues and easy preparation of the full records history of an aircraft for inspections.

FLYdocs, with an Indian office in Gujarat, is driving the paperless office revolution by delivering specialist high quality technical and business consultancy services from the UK, India and other worldwide offices. FLYdocs is an independently operated, expanding international software business, powering innovation and technology in the aviation industry. FLYdocs tailors its services to suit the clients’ obligations as the company understands that even in an industry as tightly regulated as Aviation, every client engages in a different way of working. The scanning and quality assurance is carried out by degree (and often doctorate) qualified aeronautical engineers in India, Philippines, and Chile, which offer a low cost base.

### Defining the ‘Current Status of the fleet’

The FLYdocs platform intelligently and automatically builds thorough aircraft records back-to-birth, allowing the teams in India, Philippines, Chile, UK, Spain and USA to complete a full audit in order to flag any anomalies to the airline. The teams work collaboratively, not only to create the records but to build an end-to-end process that enables or directly delivers the key business events and activities of an engineering management department. The amount of work to be carried out in house and by the supplier is agreed up front, with a planned steady migration of



**‘THE FLYDOCS EFFECT’ AS REFERRED BY THE CLIENTS**

**DELIGHT**  
Giving first class service, going above & beyond the extra mile for each other and the customers is priority. FLYdocs is not satisfied with happy customers but strive for ecstatic customers.

**INITIATE**  
Perseverance to deliver pioneering solutions that are exceptional, superior, advanced and challenging to the norm.

**RAPID**  
Being a collective of self-starting, driven people who make things happen, FLYdocs are fast and don’t like hanging about. The company delivers.

**FLEX**  
Things move and change with FLYdocs’ customers all the time – that’s why FLYdocs does too. Always open to new and alternative ways of doing things better, one may not find anyone ‘stuck in their ways’ at FLYdocs.

**DELIVER**  
FLYdocs achieves tangible results and benefits. The company is passionate about the real quantifiable benefits of what is to be done with the customers.

tasks to the supplier over time. Standard interfaces are built from the airline’s engineering systems, manufacturers and lessors. Intelligent data migration, cleansing and transformation techniques are applied to generate data structures that can be efficiently queried and analysed. And finally, standard airworthiness and exception reporting suites are built, followed by an agreement on standard handover documentation. FLYdocs builds and audits documentation for airworthiness requirements and in advance of future aircraft handbacks. Using the FLYdocs software platform to search and find documents that prove the accuracy of compilation with required tasks based on status sheets, FLYdocs supports the entire process efficiently within budget. Within this process FLYdocs scans documentation or makes use of documents scanned by a different provider, to audit the documentation against lease and local or regional aviation authority requirements (e.g. EASA, FAA). Over 50 organizations across the globe now leverage the FLYdocs aviation data and records management platform.

### Smart Engineering to Platform Thinking

Many of the early adopters of digital capabilities were virtual organizations, creating new business models.

However, smart “bricks and mortar” enterprises are now beginning to create and use data throughout the product life-cycle, with the goal of creating flexible manufacturing, distribution and maintenance processes. “The objective is to respond rapidly to changes in demand at low cost while continuously improving efficiency and effectiveness”, explains Adrian Ryan, CEO, FLYdocs. The concept necessitates a life-cycle view, where products are designed for efficient production & maintenance, and processes are optimized for efficiency. FLYdocs enables engineering processes in a similar manner to lend to optimization through information management and analytics. There is a direct parallel of the exploitation of intelligent devices-tags in manufacturing and distribution with the ability to sense and transmit condition monitoring data to predict maintenance requirements. FLYdocs has dived in the opportunity to breathe life into previously “dark” records detailing aircraft or component installation and maintenance history to drive smart engineering practices. Great innovations are made, particularly at the coal face of engineering delivery, with the first use of drones for aircraft inspection, 3D printing of components and experiments with Google Glass for remote maintenance support and manuals. All this gives a clear picture of the very little attention that has been given to the back-end of ‘data and knowledge management’.

Now, ahead lies a peculiar opportunity to create a knowledge base across the entire airline’s maintenance and engineering operations. This knowledge base will be fed by the manufacturers, updated by the chosen maintenance management system, and integrated with the systems of regulators, lessors and other third parties active in the value chain. On a global scale, through its strategic

partnership with Lufthansa Technik AG, FLYdocs is creating the world’s first global digital records platform, capable of being utilized on demand by airlines, lessors, MROs, OEMs and authorities as well, to provide services to individual companies. The platform will also create an ecosystem to facilitate efficiencies in relationships with parties in the value chain, thereby reducing cost and risk. In an environment that enables partners to share data and collaboratively improve process & efficiency, the vision is to shift from data management & exception handling, to knowledge management & insight. A major advantage is initially seen in cost-saving, and gradually in the visibility possible in terms of Current Status, Airworthiness, performance and safety in the real world.

**JETSTAR JOINS FLYDOCS’ CLIENTELE**

As part of the Qantas Group, who has been using FLYdocs since 2015, FLYdocs is now facilitating records and asset management to assist Singapore-based Jetstar Asia with frequent inter-fleet aircraft transactions across the group. The automation FLYdocs brings across records review, auditing and processing of aircraft documentation is driving significant cost savings for Jetstar Asia. It is expected to deliver more than 50 percent reduction in manual interaction required to manage aircraft documentation.

A team of FLYdocs aircraft records specialists is currently based on site in Singapore, primarily in charge of scanning historical archive records for the airline’s 18 aircraft. The data migration was completed in December 2016.

### A Success Story with Cathay Pacific

Cathay Pacific was one of the industry’s early adopters in moving away from paper dominated work process when they selected FLYdocs as their aircraft data and records management platform in 2013. This enabled Cathay Pacific to cost-effectively scale their business and bring on next generation digitally enabled aircraft.

A specialist FLYdocs team initially migrated all the records back-to-birth that figured over 35 million pieces of paper. FLYdocs provided Cathay with a digital maintenance history of all of their aircraft allowing the client to carry out ongoing day-to-day tasks which require immediate access to all historical records for the fleets. FLYdocs provides a window into the aircraft history meant to be used as the central source for the data required for the redelivery of aircraft. It is available remotely and securely to all parties involved in the process. The platform and the availability of all historical records in one central place enabled Cathay to electronically manage the sale or redelivery of an aircraft at the end of lease.

With searchable data and high quality analytical capability, records management ceases to be a risk and the insight, otherwise locked into ‘dumb’ paper, is surfaced, enabling better planning, cost savings, and full utilization of highly valuable aircraft assets and assemblies.

The airline can create a digital MRO platform that acts as the “brain” for maintenance and compliance planning and integrates with partners to manage end-to-end efficiency. Over time, as more airlines, OEMs, lessors, MROs and even authorities move the processes to this global ecosystem, FLYdocs is well prepped to grab new opportunities that will develop, shifting the focus of the industry to optimization and overall value through on-demand access to what really matters-data. [CR](#)

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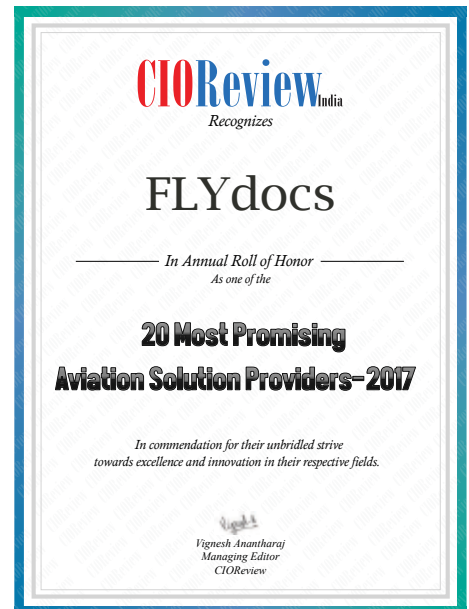
## 20 Most Promising Aviation Solution Providers - 2017

The Indian Civil Aviation industry has ushered in a new era of advancement and is forecasted to become the third largest aviation market by 2020. Driving this progress are factors such as low-cost carriers (LCCs), modern airports, Foreign Direct Investment (FDI) in domestic airlines and the growing emphasis on regional connectivity. Noticing ample opportunities in an actively evolving space, multiple new players have commenced operations offering both domestic and international services. However, to keep pace with the current and future growth in passenger and cargo traffic, the aviation industry needs to adopt and leverage emerging information technology trends in a big way.

Technological interventions such as IoT are enabling new levels of connectivity and intelligence across all functions in the airline industry. For instance, Delta Airlines is using Radio Frequency Identification (RFID) luggage tracking technology to give real-time updates on baggage status. Airlines are also moving from condition-based maintenance to IoT enabled predictive

maintenance, allowing for better sharing of both operational and maintenance data between airlines, aircraft operators and third-party MROs. Furthermore, international and domestic service providers are looking to replicate the concept of Smart Cities and gradually build their capacities to transition into "Smart Airports" in the upcoming future. In order to achieve this, aviation organizations must incorporate these emerging technologies into their business and maintenance processes, which can only be achieved with an agile software infrastructure in place that can adapt to new business processes.

With an objective to address the crucial need of CIOs to find the ideal Aviation MRO, Aviation services and solutions, CIOReview identifies "20 Most Promising Aviation Solution Providers". Being closely scrutinized by a distinct panel of judges including CEOs, CIOs, CXO, analysts and CIOReview editorial board we believe that these companies can understand the unique demands of the aviation market and streamline ways to significantly contribute to a business' efficiency and productivity.



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### Company:

FLYdocs

### Key Person:

Adrian Ryan  
CEO

### Description:

Builds aircraft data & records management platform to help Airlines, Lessors, OEMs & MROs avoid penalties and protect asset value.

### Website:

flydocs.aero

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