SWITCHED ON CFO:

Peter Gregg

Qantas

Peter Gregg leaves Qantas at the end of September after eight years as CFO. During his time in the role he has watched many other airlines struggle to survive. Qantas, however, continues to deliver an excellent bottom line result, while consistently winning a host of "best airline" awards. At the heart of the airline's success is its constantly evolving IT strategy and Gregg has been the man in the pilot seat when it comes to financing that vital IT investment...

By David McNickel

Who would want to be in the airline business?

I remember reading a "how I made it" book years ago written by a multi-millionaire businessman whose name escapes me now, in which he said the two business types that he would never consider owning were hotels ... and airlines.

But why? From the layman's perspective airlines look pretty cool - glamorous business lounges, international presence & branding, the aircraft themselves a unique blend of raw power and gee-whiz technology. And if you've ever had the good fortune to walk across a tarmac to a waiting jumbo, the smell of jet fuel and cabin crew perfume is an enticing mixture.

But scratch the surface a bit and you realise that airlines around the world face an array of challenges unlike those presented to any other business type I've ever investigated. For a start, the aircraft are insanely expensive – around US$320 million for the new double-decker Airbus A380 for example.

Running costs are staggering. It takes 216,000 litres to fill up a typical 747-400, which, if you pulled up to a standard gas pump in Sydney, would mean a bill of around $330,000 dollars just to gas up a plane. Divide that number by 400 passengers on a Qantas flight from Sydney to Los Angeles and it's $825 per passenger just to cover the cost of fuel.

Then there's dealing with the world's airports. Typically they're monopolies with a total lock-down on their city or region. If you can't get a decent landing rights price from Sydney, Brisbane or most airports in the world for that matter, you have nowhere else to go. In terms of competition, the airline business is highly protectionist. Non US carriers cannot fly internal routes in the US and similar laws exist in most other countries (including here). Underline that with the fact that a large percentage of the world's international airlines are actually majority owned by their governments (how much do you think Saudi Arabian Airlines pays for fuel?), and you realise that this is nothing like an even playing field.

Finally there are the powerful unions, the terrorists who would like nothing better than to blow your planes out of the sky, the fact that your service must be delivered on time all the time, and the weather - which can cancel flights and shut airports causing complete chaos pretty much anytime it likes.

Within this maelstrom of uncertainty, Qantas CFO Peter Gregg's job description was fairly succinct. "Peter is responsible for monitoring the financial performance of the company," was how it was outlined in a recent press release.

Within his portfolio of responsibility is Qantas's IT infrastructure and I asked him if these challenging issues – apparent in a quick journalistic "once over" of the public facing side of the airline business – are just as prevalent in the behind-the-scenes IT area.

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"Yes," he says, "particularly with what we call 'legacy airlines' (airlines with long histories like KLM, Qantas and British Airways, as opposed to newer cut-price carriers like Ryanair and easyJet). A legacy airline is incredibly complex. At Qantas we've got holiday businesses, we've got business travel businesses, freight businesses, catering businesses. You name it, we've got it. The problem in part is that everything has to interlink back to the reservation systems, and then they have to have linkages into your finance systems. So you have a huge number of interfaces."

Gregg says Qantas has for many years been overhauling its ERP system in an attempt to provide clarity.

"Our ongoing ERP program is to simplify and remove a lot of those interfaces and make the system more efficient."

If We Build It ...

What's also rather unique about the legacy airlines and their IT infrastructure is how proprietary it has been up until relatively recently, as Gregg explains.

"There has been a long, long history of development at Qantas that has really hung off the reservation systems. In my earlier days here the two reservation systems were written in house – a domestic system for Australia and an international system for Qantas," he says.

> "We're actually the launch customer of Amadeus globally for a new departure control solution... It's going to significantly improve the speed at which passengers can be checked in..."

"Then when we put the two together we had to actually build a bridge between them to have them talk. And then British Airways bought into Qantas and it had a similar issue. So everyone sat down and saw the cost of continuing to run proprietary reservation systems and that's when we effectively decided to move to Amadeus."

Based in Madrid, Spain, Amadeus was founded by airlines Air France, Lufthansa, Iberia, and SAS in 1987 as a Global Distribution System company. Since then it has grown to become one of the world's leading IT solutions providers for the travel industry – serving airlines, travel agencies, airports, cruise lines and many other travel-centric organisations with booking, freight, baggage handling and business intelligence solutions.

Qantas uses Amadeus's Altéa customer management solution for reservations, inventory and departure control. In fact, in 2007 Qantas was the first airline to roll-out Amadeus's next generation load control system which receives data direct from the airline's load planning, freight, fuelling and airport information systems - removing existing manual processes.

Another impressive feature of the Altéa departure control system is its Autoload function, which ensures items to be loaded onto aircraft are automatically designated to weight and balance positions that will optimise fuel efficiency and streamline loading and unloading. Every litre counts – Qantas's fuel bill in the 2005/2006 financial year was $2.8 billion – at a time when oil was around US$70 a barrel.

With oil prices now doubled, it's likely Qantas's annual fuel bill is in the region of $5 billion or more. Gregg says Qantas is also currently rolling out a new Amadeus check-in, boarding and baggage management solution.

"We're actually the launch customer of Amadeus globally for a new departure control solution which is how we get people away at the airports. It's going to signifi-

FINAL DESTINATION - Qantas Annual Profits (after tax)

	2002	2003	2004	2005	2006	2007
Total Revenue (Billions)	$11.3	$11.4	$11.4	$12.6	$13.6	$15.2
Profit after Tax (Millions	$428	$343.5	$648.4	$763.6	$480	$720

cantly improve the speed at which passengers can be checked in and give a lot more detail to the customer as well as the check in agent."

Gregg says passengers will be able to see what seats are spare on their aircraft, pre-allocate their seats and check in by telephone. "All sorts of things you can't do with the existing technology."

He says Qantas adopted a "best of suite" approach to its IT solutions about five years ago to avoid the cost of bespoke systems development and the expanding relationship with Amadeus is a testament to that philosophy. (Qantas has confirmed its relationship with Amadeus through to 2017.)

It can also make things easier at airports. Although Gregg says many airports are still running proprietary systems, Amadeus also provides airport software and the fact that over 35 carriers internationally are using its products (including British Airways, Lufthansa and United) means that interfacing with airport systems is much easier than it used to be.

Managing The Load

Despite this, however, with over 80 years of history, Qantas has a daunting number of proprietary IT systems and interfaces in operation.

Keeping all these solutions operational involves an IT team of mammoth proportions. Although Gregg says Qantas has downsized its IT staff considerably in the last 10 years, it still employs over 700 in this area. One reason for the big IT team is that many of the company's legacy applications are written in old programming languages like COBOL (which first appeared in 1960).

"Systems analysts that are skilled in that ilk of programming are few and far between," says Gregg.

The upshot of this was that Qantas moved much of its IT applications support and maintenance to India-based global service providers Satyam Computer Services & Tata Consulting Services in 2006.

Commenting at the time, Qantas CEO Geoff Dixon said the support and maintenance work related to "over 300 applications that use a wide range of computer languages and technologies," and in order to deliver a "best practice" IT service similar to that which Satyam and Tata could offer, Qantas would have had to invest $100 million in-house - an investment it could not support.

"In India the issue is to rewrite those older programmes over time into later generation languages," says Gregg, "and move to a more efficient platform than what we've got. Clearly we couldn't do that in Australia as the resources weren't here."

Similarly Qantas has outsourced its data centre operations to IBM in 2004 and has had a customer data facility in Germany since 2002.

A New Broom

Although the idea of scrapping Qantas's entire IT system and starting from scratch must have held a certain appeal at times, it was never really an option and an 'incremental improvements' approach has driven the airline's IT evolution.

"From an IT investment perspective we don't want to spend money on an IT project unless it delivers returns quickly," says Gregg.

"We look for about a three year ROI. But it's a constant cycle. We'd love to be further ahead in some areas than what we are but sometimes the technology hasn't been there or we haven't been able to change the business to do it a different way."

But with its wholly owned subsidiary Jetstar, however, there was the opportunity to start with a clean slate. Qantas had already experimented with a "low cost" airline, when it launched Australian Airlines in October 2002. Australian Airlines did not compete directly with Qantas, instead flying routes (into Asia for example) that Qantas had either withdrawn from altogether or could not deliver a profit on with a full service airline.

Soon after launching Australian Airlines, however, Qantas faced domestic pressure from Virgin Blue and responded by launching Jetstar – a true low cost airline – to operate domestic routes and compete directly with the Richard Branson upstart (Australian Airlines ceased to exist in July 2006 and Jetstar has expanded internationally to fill the void).

As Gregg explains, in terms of its IT systems, JetStar gave Qantas the opportunity to start an airline from scratch with standalone solutions. "It uses a different reservation system," he says.

"Whereas Qantas uses Amadeus, Jetstar uses a much simpler scheme called Open Skies by >

Navitaire (also deployed by many of the world's low cost airlines including Southwest, Virgin Blue, Ryanair & JetBlue). It doesn't have all the inter-linkages, fare classes and baggage connectivity that you need in a full service airline so it is a simpler scheme."

Cost cutting technology has been at the fore with Jetstar from day one says Gregg. "Jetstar bookings are over 80 percent online," he says.

"It has kiosk check-ins at the airport and SMS check-ins are coming too – it's highly IT intensive." Customer use of Qantas's website is also growing says Gregg – with 70 percent of frequent flyer redemptions, and 40 percent of domestic tickets sales transacting via Qantas.com. International online sales remain lower, however, at 20 percent.

"International has been slower to grow," says Gregg, "because you need to have a relationship with carriers at the other end who will respect the 'e-ticket' philosophy. There's nothing worse than for a customer to turn up in the middle of Timbuktu with an e-ticket and the partner airline to say 'we don't know what you're talking about'."

He says the International Air Transport Association (the body that represents airlines) has global e-ticketing as a priority, however.

Driving Efficiency

Airport check-in is one area where new "efficiency" technology is clearly visible to customers. In terms of the check-in process Gregg says the problem for the airlines was that all the airline terminals in Australia were built before the privatisation of the airports – back in the days when passenger numbers were much lower.

With deregulation the customer volumes have increased significantly, but in terms of the physical space available at the airports, the airlines are in a strange limbo, as for the most part they are at the mercy of the airport owners. If the airport owners decide to extend the terminals, great, but if not, the airlines have had to find a way to maximise available space and avoid passenger congestion.

With this in mind, Gregg says Qantas wanted to give its passengers multiple access points to have their bags checked & tickets issued and introduced its first QuickCheck kiosks in 2002 at Sydney and Melbourne airports. But the first crack didn't go very well, says Gregg, with software issues, physical positioning and the fact that only passengers with no checked baggage could use the kiosks, all combining to deliver a less than stellar result.

> "We'd love to be further ahead in some areas than what we are but sometimes the technology hasn't been there or we haven't been able to change the business to do it a different way."

A second attempt in 2005 serving domestic passengers with or without bags has fared better he says, but it could still be better.

"Even now on a bad day the queues can be very long and the airport infrastructure doesn't cope well with a lot of people queuing. That said, the new kiosks work substantially better - especially in the airports where there's a lot of congestion in the check-in area and we don't have the ability to expand the terminals."

In terms of its overall IT evolution, and non-airline specific business solutions like CRM and VoIP, Gregg says Qantas "has been pretty successful but not as successful as we would have liked. It's taken longer than we thought. We are in the throes of putting in the finance system now which is going quite well. We've had to re-platform the ERP as we started out using open source software but we've now moved back to an IBM platform."

Qantas's foundation suite is Oracle, says Gregg, and the company has dabbled with Oracle CRM.

"But they've had some developmental issues there so we're doing a few other things at the moment. We use Hyperion for some of our additional business tools on the CRM side and we are still doing some work with Oracle to see where we can get with that but we might go a different way, we haven't made a final decision yet."

Also still in the 'maybe' tray is a company-wide VoIP solution.

"We are evaluating it," says Gregg. "There are a number of areas like reservations and those sorts of things that are do-able in that area, but nothings confirmed at this point."

So what about "gee-whiz" technology? I ask Gregg if there are any technology solutions deployed by Qantas that the flying public might be surprised to find out about?

"There's a few things," he says. "For instance because of the technology we've put on our planes our engineers are able to monitor the performance of the engines in-flight back at our home base. So if there's a problem they can actually link into the on-board systems back at base, monitor what the engine is doing and give advice to the cabin or the technical crew on-board."

Staying on the topic of engines, Gregg says that Qantas is currently in the process of spending $250 million on a new IT solution tracking its engine inventory.

"There's a huge inventory of spare parts that our engineering business runs on," he says, "and regulatory authorities require you be able to tell them about every piece and part in a plane. Where it is, how long it has been there, where it came from and where it's gone to. Tracking the life of parts is something behind the scenes in the airline business passengers would probably never think about."

Aircraft entertainment systems are another where technical innovations are cutting costs. Talking about preparing Qantas systems for the arrival of the A380 Gregg says that rather than manually loading new movies, music and TV

shows into the aircraft's entertainment centre, the A380 will be able to do this wirelessly.

"With the next generation of in-flight entertainment we'll update the entertainment systems as the aircraft touches down by radio connectivity - so you don't have to go through the hassle of downloading and running the risk of the system collapsing on you which it has done from time to time."

One question I'd always wanted the answer to, is whether or not today's planes can actually take off and land themselves – look ma, no hands as it were.

"Yes," Gregg laughs, "but trust me we have guys with their hands on the wheel. You would use that technology in different circumstances obviously. Different airports around the world have beacon guidance systems if there's very dense fog and the pilots have poor visibility. In those situations you can guide the plane in on that and you'd want the plane doing the flying not necessarily the pilot."

In the weeks I spent researching and writing this feature, airlines made the news almost every day. And while the story about the emergency landing in Manila of a Qantas 747 certainly captured the most attention, it was, nonetheless, an aberration.

Other stories, however, signalled something much more significant, with Qantas CEO Geoff Dixon telling a Sydney audience that the cost challenges facing the airline industry today would likely result in nothing short of an aviation new world order.

"Right now the global aviation industry faces not just a shock or indeed a blip or indeed a crisis really - but a permanent transformation," he said.

While Dixon said that he believed the efforts that Qantas had made thus far would ensure the airline could avoid the "dark destiny" of being driven to bankruptcy or swallowed up in a mega takeover, it's likely the CEOs of the 24 other airlines that have disappeared in the last six months thought the same thing.

As CFO Gregg prepares to step down from the post, the race for Qantas to stay in front of this economic curve is never-ending.

"It's important that Qantas stays at the forefront driving any competitive efficiencies that it can get," he says, "and it will continue to do that with aircraft technology, IT technology and human technology."

TECHNOLOGY TIMELINE

FEBRUARY 2002
Qantas CityFlyer passengers in Brisbane, Sydney and Melbourne able to use mobile phones while boarding aircraft via aerobridges and inside aircraft until doors are closed.

FEBRUARY 2002
$50 million investment announced in Qantas airport lounges. More business facilities using the latest technology. Communications capability throughout the lounge allowing customers to plug in lap tops, charge mobile phones or access email from an armchair.

FEBRUARY 2002
New e-business initiative, Project eQ, launches – aimed at reducing complexity and increasing productivity:
- streamlining corporate HR, Payroll and Financial systems, providing a single web-based interface;
- creating an internet-based e-procurement and inventory management system;
- developing new customer and loyalty based applications;
- delivering web-based e-mail for all employees and an enterprise-wide employee portal allowing access via the internet from any location worldwide.

AUGUST 2003
Self-service QuickCheck kiosks in place at Sydney, Melbourne, Brisbane and Canberra domestic airports.

AUGUST 2003
Qantas Voice trial using speech recognition to manage Frequent Flyer phone enquiries and reduce call waiting times. Qantas Voice software developed by Unisys Australia, Avaya Communications and Scansoft.

SEPTEMBER 2003
In-flight SMS launched. Customers in all seats can send messages using their in-seat telephone handset, and also to receive replies.

DECEMBER 2004
Qantas offers interline e-ticketing (IET) with all Oneworld alliance partner airlines.

OCTOBER 2005
New QuickCheck domestic kiosk rollout begins (for passengers both with and without checked bags).

AUGUST 2006
Qantas announces 2007 trial of new technology enabling customers to send and receive emails and text messages via their own GSM mobile phones and email via GPRS BlackBerrys and laptops.

MARCH 2007
Qantas.com introduces online check-in enabling domestic passengers to choose their preferred seat and print their boarding passes before going to the airport.

JULY 2007
Qantas.com announces new online payment feature allowing customers to book flights and defer payment until closer to their departure date.