

All airlines are being forced reduce costs at all levels. The low-cost model is not the right approach for every airline. The important issue is that costs are appropriate for the service provided. The sell-to-board process is analysed and IT systems to help eliminate cost and waste are reviewed.

Improving the sales process with new technology

While network airlines have restructured their cost bases, they face continued pressure to reduce costs. Low-cost carriers (LCCs) have captured a large share of the regional airlines' markets, and are now attempting to break into long-haul markets. A common factor across all business models is the drive for cost-efficiency at every stage.

One of an airline's biggest costs is the sell-to-board process, but new technology has been leveraged to continually drive this down. LCCs have been in the vanguard of this, and network carriers have followed their lead. Some, like Aer Lingus, have transformed parts of their business into quasi-LCCs. This includes the use of simplified pricing, direct marketing, direct sales and distribution bypassing the global distribution systems (GDSs), and simplified check-in and boarding.

There are marked regional variations in cost composition between different airline business strategies. The common thread between regions is that the sales and distribution process is one of the major cost differentiators that allows LCCs to succeed, and the single largest airline cost in all global regions.

International bodies like the International Air Transport Association (IATA) are identifying and delivering cost efficiencies through campaigns such as Simplifying the Business (StB), which includes e-ticketing and barcoded boarding passes (see *Solutions to ease check-in & seat allocation, Aircraft Commerce, August/September 2007, page 44*). The technology barriers to cost reduction are relatively low. With the airline industry still experiencing strong competition and excess capacity, lower costs are not always enough to improve the bottom line. IATA's July 2006 report, Airline Cost Performance (IATA

economics briefing no. 5), comments that: "Airlines must not forget the differences in product quality they can offer and the competitive advantages that are available. IATA's work demonstrates there are still important lessons on cost stability and control that can be learned from LCC airlines. Nevertheless, certain additional costs are worth preserving if they can attract and expand additional revenue streams." So squeezing cost out of the sell-to-board process at any price may not be a clever strategy for airline executives.

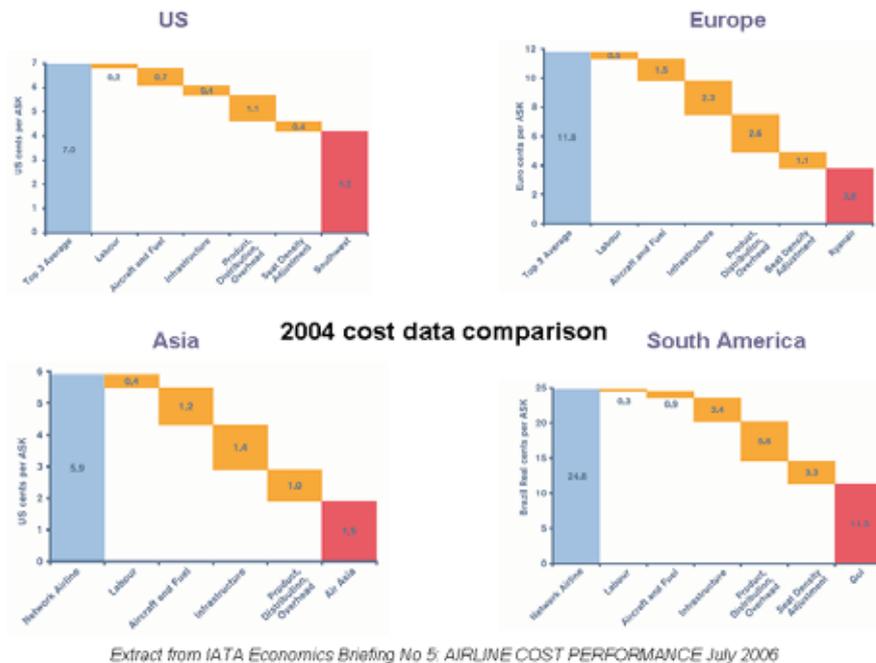
Driving down marketing costs

IATA's theme of intelligent cost reduction is picked up by a recent report from Item Consulting on marketing and sales strategy in the airline industry. "Almost any other business in the world would be excited at the prospect of creating a global sales network by investing only 10% of revenue," says Mike Fill, partner with Item Consulting. "Not the airline industry. Airlines have turned their backs on this golden opportunity by decimating their global network of corporate agents, leisure agents and other travel resellers by reducing commissions effectively to zero.

Item Consulting's point is that direct sales channels mean a move to more pure-price competition, and these sales channels cannot build customer loyalty. Airline executives should carefully consider reducing the cost of marketing. "In parallel with direct internet distribution is the whole question of e-mail marketing. This is a simple concept but one which is hard to implement effectively," continues Fill. "The main issues are: Where do we get the e-mail addresses from? What is the quality of the e-mail address? Are they really a buyer? What information do we know about the person regarding their travel

patterns and needs? Are they a current customer? Unfortunately, there are few e-mail marketing databases that can answer these questions. Most e-mail marketing campaigns typically have less than a 0.5% success rate. At a typical cost of 15p to 25p (30 to 50 cents) per e-mail, the cost per sale can be £30-50 (\$60-100). This is typically more than commission. Without being able to send very targeted e-mails to customers who are in a 'buying process', the volume of e-mails you need to send becomes unsustainable and you are in danger of increasing the opt-out rate significantly. This inability to segment customers is one of the key reasons for increased customer dissatisfaction with unsolicited e-mails."

While there are new technology solutions from SITA, Sabre and smaller companies like Hitit to improve the customer relationship management and frequent flyer databases, Item Consulting's point remains valid. "Intermediaries, whether they are agents or websites, will always need to provide airline tickets as part of their overall service offering," says Fill. "Without any incentives to promote specific airlines' products, they will offer airline products on a lowest cost basis. Airlines will have lost control of the intermediaries, so they will have to reduce prices to ensure they get some representation. Airlines will be forced to increase their direct marketing activity significantly, and unless they can access quality e-mail marketing databases, costs will increase beyond the level they paid in commissions. Since end customers can use the internet to scan all airlines for the lowest cost, airlines will be forced to lower prices to compete. Many airlines will find this unsustainable and either go out of business or reinstate commissions to re-sellers in an attempt to get away from price reductions. The alternative would be for airlines to extend



their range of services to that of a full web travel intermediary and make money from other products rather than their own, treating the flight as a loss leader." Evidence from the growth in ancillary revenue strategies (see *Exploiting ancillary revenue streams, Aircraft Commerce, December 2006/January 2007, page 29*) supports this point.

Sales and pricing solutions

One main investment area for most airlines is improving the cost of selling a seat, and the incremental revenue that can be achieved by clever pricing strategies that go together with sales.

A significant trend at the moment is integration across processes and the simplification of systems and interfaces. This holistic approach to systems inevitably means that the large information technology (IT) providers dominate this market, especially for network carriers and some of the larger LCCs. SITA is one well entrenched provider of complete suites of sales tools. "We provide an integrated offering to our global customer base," says David Owen, senior marketing consultant at SITA. "The quest for lower costs, increased revenues and improved customer service continues, however, as airlines seek to maximise their potential. Airlines continue to pursue a range of distribution strategies varying from direct-only to multi-channel as befits their market environment. For most airlines, however, strength in direct distribution remains a controlling force in their distribution mix, and provides them with the ability, and the imperative, to take control of their distribution and, where appropriate, shift business to the lowest cost channel. For

example, the SITA 2006 Passenger Self-Service study discovered that 60-80% of travellers in three major locations (Atlanta, London and Hong Kong) would like to use on-line booking as frequently as possible in the future.

"Our own surveys reveal that in 2007, 90% of airlines are using their own websites to sell tickets. The percentage of tickets sold through their own sites continues to improve. The average is 26.6%, with 20% of carriers reporting upwards of 50% of ticket sales made through their own sites. These figures demonstrate the almost complete adoption of web-based sales, but they also show that there is still room for improvement in the way that airlines make effective use of their most cost-efficient direct distribution tools. SITA offers a range of solutions to help airlines reduce the cost of their sell-to-board process. SITA Reservations is the world's largest, international, neutral, multi-host system supporting the full spectrum of airline multi-channel reservations and inventory management requirements. SITA's Consumer On-line Reservations Service is an internet booking portal for airlines hosted on SITA Reservations. SITA Smart Front End is a custom-designed airline reservation agent interface that improves productivity and reduces training overheads. SITA E-Commerce Platform provides flexible and customised consumer, travel agent and corporate booking interfaces. SITA Airfare Shop allows easier searching for fares through calendar displays of available airfare prices. Not all airlines are ready to rip out their legacy systems, however, so SITA Integration Platform provides a flexible architecture for interfacing legacy and new generation

IATA's analysis of airline costs reveal that the biggest cost differences between traditional and low-cost airlines in all global regions is the cost of distribution and sales.

travel applications."

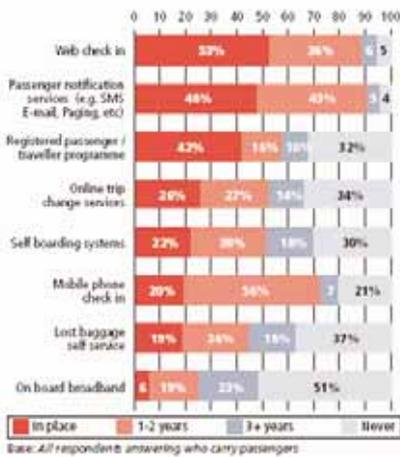
Airlines seem to welcome this portfolio approach to solution provision. "Royal Jordanian's experience is further confirmation that airlines are looking for straightforward solutions to simplifying their distribution," says Samer El-Majali, chief executive officer and president of Royal Jordanian Airlines. "We prefer a holistic approach to the challenges of optimising yield, while offering state-of-the-art shopping tools to the consumer. SITA offers a wide-ranging portfolio to address all these complex issues from on-line distribution to revenue management."

The 'sell-to-board' process

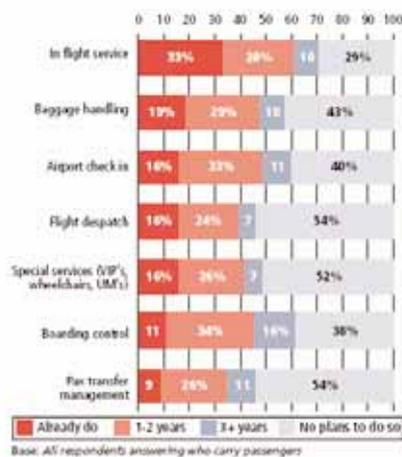
A major force in airline IT is Amadeus. Not only does it manage one of the largest GDSs in the world, it also provides integrated airline sales solutions. "Cost reduction in the sales process was the focus for airlines in the early part of this decade," says Frédéric Spagnou, vice president, airline business group at Amadeus. "Airlines have been switching their focus to improving net yields. Distribution accounts for 12% of total operating costs for a full-service airline. Many airlines have thrown away yield management techniques in a race to counter the LCC threats that have grown. They have lost money doing so. Yes, there have been cost-cutting initiatives like e-ticketing. Amadeus is the number one provider of e-ticketing solutions with 200 carriers in 180 markets worldwide. But they all still need to focus on yield improvement if they are to stay profitable.

"If we move down the sell-to-board process, web check-in at the back-end is another step down the cost reduction route. For full service airlines, however, I feel that it is still a big issue and that many business travellers still want a person to check them in. The cost reduction is still significant, however," says Spagnou. "A Forrester report recently put the cost of traditional check-in at \$3, but self-service at \$0.50. What is needed is some standardisation on barcoding of boarding passes and the use of common departure control systems. We have moved, and will continue to move, to a multiple common-use kiosk as an interim solution. It is actually a relatively small step, but will remain valid for infrequent, low-technology travellers

Initiatives implementation and planning at organisation



Plans to provide handheld devices



Source: Airline IT Trends Survey 2007, co-sponsored by Airline Business and SITA.

for some time yet.

"There are new areas of technology improvement. One is revenue integrity. This is an area attracting a lot of attention right now. It involves analysing bookings to remove fake and 'stupid' reservations. We have some tools in this area," says Spagnou. "Another trend airlines need to keep an eye on is the growth in e-commerce. I don't mean the growth in airline websites, but rather supermarkets like Expedia and Kelkoo that scan the internet to provide the lowest prices. Of course, the lowest price is not the key criterion for some travellers and they need these sites to operate more flexibly.

"There is a downside for airlines going to on-line distribution systems. If you consider the traditional shopping model, one travel agent was looking for, and usually buying, a ticket. Now you have hundreds of separate people looking on-line and very few necessarily buying. This has a massive impact on an airline's internal IT infrastructure, and has led to parts of the sales and reservations systems being outsourced," says Spagnou. "Amadeus manages many airline systems as hosted solutions. Marketing is also an area where change is occurring. With websites like Expedia, a traveller becomes a customer of Expedia rather than of British Airways (BA). This is a threat to BA's marketing strategy."

Amadeus' new Altéa Customer Management Solution has close to 150 airlines now using at least one core component to help run their businesses. Currently, over 75 airlines use the Amadeus e-Travel Airline Suite to power more than 250 websites in more than 80 markets. Amadeus e-Travel's airline customers include bmi, Air France, Cathay Pacific, Finnair, Iberia, Qantas and Singapore Airlines. Amadeus has so

far facilitated the uptake of e-ticketing by 233 airlines and 149 markets, and more than 82% of tickets issued through its system are now electronic.

Amadeus fully hosts e-ticketing for 71 airlines with Amadeus e-Ticket Server. Amadeus has built over 750 electronic interline agreements for airlines

Not all plain sailing

Big IT systems are difficult to manage, as shown by Lufthansa Systems' (LHS) recent decision to drop its major \$40 million new-technology investment in the Future Airline Core Environment (FACE) passenger management platform. The company cited 'commercial reasons' for the decision. FACE was intended to support the core processes of passenger airlines, such as schedule distribution, reservations, inventory, ticketing and departure control. "We had planned to offer FACE to airlines as a passenger system that is based on new technology," a company spokesperson said.

However, LHS continues to develop and offer key systems to improve the sales process. Revenue Integrity is a recently released product that aims to cut unnecessary costs from the distribution process. The system identifies passenger bookings where a ticket has not been issued despite an elapsed ticketing timeline. Also, the system looks for undesirable multiple bookings, and finds fake passenger names from agents that want to block seats and find passengers later. All these circumstances lead to seats being blocked, but not sold, representing considerable amounts of lost revenue. By using revenue integrity tools, airlines can save costs and create additional revenue of up to one Euro per segment booked. This makes an important contribution to profits, given the number of segments

A survey of airline investment plans reveals that self-service and web check-in has accounted for the largest portion of investment by airlines in recent years, while passenger notification services will take the largest portion over the next two years.

booked daily.

The Revenue Integrity suite comprises three core functionalities. The Flight Firming Tool analyses the ticketing time limits in an airline's bookings. One of its claimed advantages is its compatibility with all back-end systems. LHS's experience has shown that identifying expired but not ticketed passenger name records (PNRs) allows the release of 50,000 seats per day at an international network carrier that can then enter the inventory and be sold again. About 10% of all single-segment bookings are cancelled due to expired ticketing deadlines. The system also checks for fictitious names and passive segments and processes group synchronisation as optional features.

DupeCheck is the module that finds and eliminates duplicate bookings. It identifies them within the same PNR as well as in multiple, similar bookings. It also highlights suspicious bookings based on different airport codes within the same city as well as unrealistic connecting times. An airline can spot over 10,000 fake bookings per month, resulting in additional revenue from re-sold seats of one Euro for every segment booked.

PaxWatch is the security component of the system, identifying passengers blacklisted by immigration authorities or grounded by the airline. The solution includes automated notification of authorities as well as a comprehensive reporting feature. A growing number of major airlines are using parts of, or the entire, tool today, including Lufthansa, Austrian, TACA, Regional Airlines, Condor and LTU.

Retaining your integrity

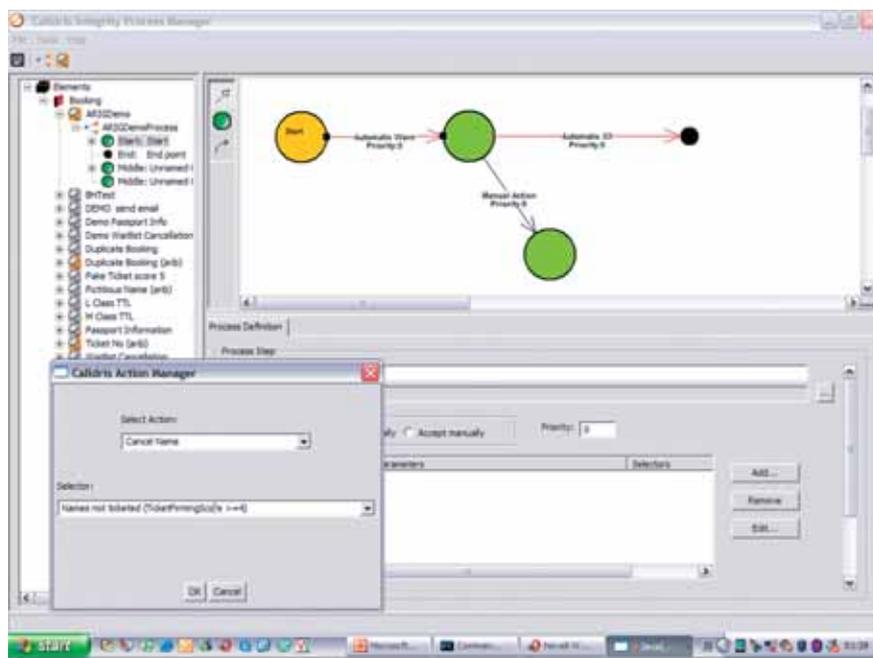
The revenue integrity solutions market is growing, and there is room for niche players to contribute with specialist solutions. One such company is Calidris from Iceland. Its analysis of the sell-to-board process reveals that leakage occurs through lack of systems integration, even at the departure gate. About 7% of revenue leakage comes from losses in distribution, that is incorrect availability. The largest losses, 38%, come from speculative bookings. Another 29% of leakages come from ticketing errors, which are change fees not being collected. The remaining 26% of leakages come

Calidris of Iceland has analysed the sources of revenue leakage; with speculative bookings and ticketing errors accounting for the two largest portions. Calidris provides specialist solutions to identify and minimise these losses.

from departure losses, where no charges are made for passenger upgrades.

Calidris claims to have solved some of the challenges with data from paperless tickets, as well as finding ways to get data out of e-tickets sooner so that ticket numbers can be validated and reduce the workload in revenue accounting. It also claims it can spot errors in interlined e-tickets, although it may need correcting by the other airline involved. It believes its integrated approach cannot be matched by some of the other revenue integrity solutions, which have limited its own ability to reap the full benefits. The Calidris solution takes a holistic view of the booking, ticketing and departure record processes that allows revenue leakage to be stemmed from the entire order process. It bridges the process gaps created by the single-function legacy silo systems and joins up the data from them into an integrated order to enable joined-up business processes to be applied across the silos. The system enables the release of hundreds of thousands of seats so they can be sold again to someone that will really fly, allowing airlines to optimise revenue potential per flight. One beneficial by-product of joining up the order is the much improved flow of information, from which data can be gathered for management purposes.

“After 50 years of ticketing, we still have data on magnetic drums,” comments Sigurdur Olafsson, chief executive officer from Calidris. “We are still living with these old data constraints, which have an adverse effect on the airlines’ revenue. It is time to start looking at airlines as mature industrial companies and to apply proven manufacturing and industrial engineering practices to these companies. These practices can streamline airlines’ process-intensive activities to create a lean organisation and stop revenue leakages. They should be carefully planned with a scope that is neither too narrow nor too broad. The solutions should be simple to implement and operate, yet powerful enough in scope to reap all potential benefits from the chosen business area. With the introduction of total revenue integrity principles, airlines are realising profit improvements through higher load factors, increased numbers of seats open for sale throughout the entire booking



period, fewer no-shows, reduced GDS fees, cleaner data to improve yield management forecasting, fewer resources required to analyse bookings and tickets, and improved cashflows due to reservations ticketed earlier.

“For example, a passenger books a flight from London Heathrow to Reykjavik. Their itinerary is uncertain, so they make one booking for the morning, and a second one for the afternoon as a back-up. The passenger makes the morning flight so becomes a no-show for the afternoon. This revenue is therefore lost. Another classic example is group bookings. The original booking is made for 20 seats at a fixed price, without names for each seat. The reservation requires that names are provided by a certain date. There is a second date when the final tickets are issued. If several travellers want to vary their itinerary, however, their bookings must be separated and split. Most airlines charge a change fee for this, but the complexity of the process means that many leak these fees. Overall, between the booking, ticketing and final departure (DCS) about 60% of flights will be affected, resulting in 4-6% of total airline revenue being leaked. On global sales of Euro 290 billion (\$420 billion), this means that revenue leakage can be \$20-25 billion.

“How do airlines start to address these issues and begin to plug the leaks? First, all the order data must be pumped out of the various silos inside the organisations, and put in an order data warehouse,” says Olafsson. “This warehouse can either be managed internally or hosted by companies like Calidris. Our system is run either on an Oracle or a DB2 database. We then provide a service layer on top for the airlines to look at and analyse the data.

Some airlines buy this as a service. The order data is brought into the data warehouse and initially cleaned to look for obvious mistakes and missing data. The Calidris system then processes the data to find double bookings. It’s all in real time so rogue bookings can be purged or cancelled. This auto-releasing means that the airline has a chance to re-open bookings for no-shows. For example, the return leg of a booking can be released if the passenger doesn’t check in for the outward leg.”

The Calidris system works with most internet booking and reservation systems. It allows the airline to see its entire sales process from end to end and spot revenue leaks before they have a significant effect on revenue. Since its launch in 2002, Calidris has added eight airlines including Finnair, Icelandair, Royal Jordanian, Emirates and Aegean. In terms of results, for example, Emirates saved \$8 million by reducing revenue leakage in six months. The Calidris solution can be installed locally by an airline, or can be used as an application service provider (ASP) hosted solution. In the ASP model, Calidris offers flexibility in charging. Airlines have three payment options: paying per client PNR processed in the system; paying a monthly flat fee; or even paying a share of revenue saved.

BA is the latest Calidris customer, having just gone live with a business change management solution. In the four months that BA has been running this application, it has seen measurable improvements in being able to return more seats to sale at an earlier stage. More recently, another process has become operational that monitors the validity of planned minimum connecting times for transferring passengers as bookings are made. This will improve the



level of customer service provided and minimise disruption to a passenger's travel plans. The airline expects significant bottom line benefits to be achieved within one year.

"One of the enduring challenges for the airline industry has been linking data and workflows between legacy GDSs and passenger systems," says Paul Coby, chief information officer at BA. "The legacy systems are optimised around servicing individual bookings one at a time and contain a lot of poorly structured data. The Calidris technology allows us to manage complex processes across multiple customers and flights in a way that was impossible before, giving us opportunities to improve customer service as well as solve operational issues and address lost revenue opportunities."

Another niche player is Kale Consultants, whose suite of revenue accounting and integrity tools is being used by about 35 airlines, including Air France, Continental, Flybe and bmi. Revenue integrity is also an area of focus, and Kale is enhancing its application by checking on time-limited fares to ensure they come off sale at the right time.

Revenue integrity is handled by Kale's Revenue Recovery and Protection Service (RRPS) passenger sales audit, which the company estimates can gain up to 1% of agency sales. It corrects fare, tax and commission errors and has a special module to handle the complexity of interlined e-tickets. The company also offers Revera, a new-generation, automated, revenue-accounting solution.

It tracks forward sales and unearned liabilities at the coupon level and makes accurate tax calculations. It also feeds a business intelligence module, Prism, providing timely and accurate management information. Revera aims to reduce processing costs by automating transactions and managing by exception. Larger airlines install Revera over their own systems, but carriers like Qatar and bmi outsource the job to Kale. Kale has the LCC market in its sights, since it believes it will move towards more complex sales. The company believes that airlines will improve cashflows by identifying and analysing revenue leakages and delayed cash inflows. For interlining, Kale offers APEX, a proration engine integral to Revera. This ensures accurate interline billing and verification of inward bills.

Are airlines investing?

Are the airlines taking advantage of all the tools available and investing in them? One indication of this comes from the Airline IT Trends Survey 2007, co-sponsored by Airline Business and SITA. The research was carried out in the second quarter of 2007 and surveyed the world's top 200 airlines, including LCCs, together with a small group of influential regional and charter operators.

Regarding investment decisions aimed at reducing the cost of the sell-to-board process, or indeed improving the productivity of this process, the view is mixed. The illustration (*see chart, page*

Airlines are leaking revenue in all stages of the sell-to-board process, and annual losses total billions of dollars. Investments in systems will only provide a payback, however, if implemented correctly.

45) shows that while most airlines either have, or will invest rapidly in, web check-in, a substantial number do not see the need for any investment in boarding systems or mobile phone check-in. This is reflected further in the analysis of investment in mobile solutions. In most areas of the back-end of sell-to-board process, airlines did not plan to invest in mobile productivity tools for their staff.

Summary

Improvements in technology underpinning the sell-to-board process can deliver significant results. Figures of \$2 billion globally are quoted for improving revenue integrity, for example. If this really was achievable, it would dramatically offset increasing fuel prices and infrastructure charges, such as landing costs and carbon taxes.

While technology can certainly help, like most IT investments it needs planning and an integrated, co-ordinated approach. Airlines are investing heavily in new IT, but not in all segments of the sell-to-board process. Some are sticking with keeping it simple at the final delivery end, boarding, and the check-in process.

A revolution in the sales costs of airlines has been instigated by the LCC business model. While there are several lessons on cost-efficiency to learn from the LCCs, it does not mean that network airlines must adopt their business model wholesale. Airlines offering additional services for which their target customer base is willing to pay will incur higher costs. The key is ensuring that these costs are delivered efficiently and economically relative to the premium in yields that higher service quality can attract. Airlines can seek an optimal mix between cost-efficiency and product quality. 'Efficient differentiation', whereby network airlines improve cost-efficiency, but not at the expense of reducing the quality of service to the target customer base, can address both the cost and revenue side at the same time. Product segmentation can also be used, focusing on an LCC-type approach on some routes, but targeting the willingness of business and leisure passengers to pay more on other routes. **AC**

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