Revenue integrity: Delivering revenue and cost reduction benefits to airlines

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Paul Rose has over 30 years airline experience in the Revenue Management area. He was a key figure in the creation and roll-out of BA's first Revenue Management system and spent three years at Virgin Atlantic Airways implementing their first Revenue Management system. He rejoined BA to manage business process re-engineering and delivery of the first phase of their O&D RMS. He also led a Oneworld RM focus group and marketed BA RM solutions. During the last ten years, he has spoken or chaired numerous RM conferences world-wide. He is notable for creating 'A.R.I.G.' (Airline Revenue Integrity Group), which provides an airline industry focus on non compliance and revenue leakage. (See www. arigroup.org for further details). His company provides expertise in the areas of Revenue Management and Revenue Integrity. He has worked with several leading Revenue Management and Revenue Integrity solution providers. Currently, a senior consultant to SITA, he provides them with expertise for both Revenue Management and Revenue Integrity.

ABSTRACT
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Revenue integrity (RI) is an often ignored practice in the area of revenue improvement. To date, many industries particularly telecommunications, healthcare and power have employed RI in order to minimise costs and maximise revenue. These industries were late to market in the Revenue Management solution area, yet employed RI far earlier than most airlines have, which may be surprising to many. Yet airline RI has been proven to deliver a minimum benefit of 1 per cent additional revenue, with some airlines achieving 2–3 per cent benefits from additional revenue and reduced costs. In the last five years, Paul Rose has persistently campaigned for the implementation of RI at airlines, speaking at conferences, creating an organisation to promote its usage and working with RI suppliers to expand their markets. This paper provides an insight into why it should be employed at an airline, the options available and the benefits to be gained.

INTRODUCTION

Since my first whitepaper on the topic of revenue integrity (RI) (featured in issue one of the journal), there has been a strong growing trend for many more airlines to implement a RI solution. The driver for this has been the focus on cost reduction since 9/11. The airline industry has in the last ten years only delivered from a total revenue of $3030bn an operating profit of only $93m, a margin of merely 3.1 per cent, producing a net profit of $9m or a net margin of 0.3 per cent. It is therefore not surprising that something has to change.

(*Source*: Cormac Corrigan, of SITA, at ARIG conference in 2005)

RI delivers a small reduction in the GDS (Global Distribution System) costs but primarily it delivers major benefits by releasing seats

that would otherwise have resulted in no-show passengers, thus allowing reselling of the seat often at a higher yield. This delivers more than 85 per cent of the overall benefits gained. Outside of this are a host of other side benefits that are not usually even accounted for in the benefits statement, these include:

1. The smoothing of the RMS's booking curves, improving demand forecasting and hence the overall optimisation process.
2. Reduced Denied Boarding Compensation (DNB) payments (Compensation paid to passengers who cannot be carried on the flight which they are booked on due to overbooking forecasts proving inaccurate which results in the booked passenger load exceeding the aircraft capacity.)
3. Reduced voluntary or involuntary Downgrades (Passengers moved from their booked cabin to a lower one due to an absence of available seats when overbooking forecasts are inaccurate, for example a Business Class passenger forced to travel Economy.) (Heaven forbid!)
4. Reduced missed take-off slots at airports which result in penalty payments by the airline to the airport operator and long delays to the scheduled take off time.

Revenue leakage occurs where the difference between the revenue expected and the actual revenue received after departure is significantly lower, due primarily to various abuses by booking originators, or from operational impacts. RI is a process by which Revenue Leakage can be addressed, and can be either manual or systematic. An easy to recall definition of RI is 'Ensuring that the right passengers travel on the right flight at the right time and at the right fare!'

The prime areas where revenue leakage occurs through intentional abuse by booking originators (these can be travel agents, passengers, or even an airline's own staff) are:

- *Unticketed PNRs* — Unticketed bookings by the time of departure are *the* major

contributory factor to revenue leakage. With the advent of E-Ticketing, which will be almost 95 per cent rolled out by January 2008, this area will be largely addressed. No process is, however, without its flaws, and for every new technology solution that has been implemented in the last 50 years there always appears to be an innovator who then delivers a new method to by-pass the intended foolproof process!

- *Illegal class mix* — The second largest area of abuse where a booking contains a combination of illegal classes as defined by the fare rules set by the airline. This means that the selling conditions are not met resulting in sub-optimal revenue being achieved. New innovations at time of booking could prevent this, and we are currently seeing some GDS announcing new automated processes to prevent this, albeit at a cost to the airline!
- *Abuse of fare rules* — A whole raft of abuses can occur in this area, ranging from back dating the issue date of the ticket, under collections, collection charges for changes which then are not passed on to the carrier, nonobservance of penalties and numerous other items. Again fare conditions and rules should be validated and applied to the booking at the time of booking creation to ensure validity.
- *Space blocking* — Deliberate blocking of an airline's inventory, to protect space for possible future bookings that often never materialise or are sold at a low fare, with a client charged a higher fare and the balance is held back from the carrier. At best this can result in the temporary blocking of space that prevents valid bookings from being made, or late cancellations resulting in seats released too late to resell. At worst this results in no-shows upon departure. Many instances of this have been found to originate from an airline's own airport staff wishing to prevent overselling by the Revenue Management department, so virtual seats made available for sale to compensate for no-shows are booked to

prevent bookings above the real aircraft capacity. This, however, usually results in an automated RMS overbooking even further to compensate for the higher no-shows on departure. If not identified by the RI or Revenue Management department, this can result in heavy revenue losses and bad data for a long time. Education of airport staff as to why and how a RMS overbooks a flight is usually the best remedy to this problem.

- *Duplicate bookings* — While these have always existed, there is some evidence that these have increased as consumers have become more aware of price differentials at various distribution channels, leading to shopping around which often results in multiple bookings with only the lowest quoted fare being purchased.
- *Multiple bookings on several flights* — Deliberate creation of a number of bookings for the same passenger across a range of flights usually to the same destination, in order to protect space on a multitude of services as the client is unsure of which flight he really wishes to travel on. This prevents legitimate bookings being made and can result in no-shows if not rectified. Most commonly used by business travellers not sure of the time of their return.
- *Multiple bookings on multiple carriers* — A bigger problem than the one above; as due to antitrust laws airlines cannot share and compare reservations data. This prevents these bookings from being cross checked as an airline is unaware of the duplicate booking held on a rival carrier.
- *No names in a booking* — Some bookings are made without the legitimate name of the passenger who intends travelling being entered into the booking by the stipulated deadline, often entering 'NONAME' or 'TBA' (to be advised). This then puts the onus on the airline to chase for a name. With the advent of increased security it is likely this practice will disappear in the near future as real passenger details including passport

details will be mandatory at the time of booking.
- *Fictitious names* — Similar to above, but using a fake name, for example Mickey Mouse, in order to disguise a fictitious booking which might be utilised for a real passenger at a later date. Again this should be eradicated with increased security measures.
- *Waitlisted passengers* — These result in two separate problems:

  ○ First, passengers with waitlisted (unconfirmed) outbound sectors but holding confirmed inbound space. If not addressed this results in a no-show on the inbound sector, as obviously the passenger was not booked outbound.
  ○ Secondly, bookings that are wholly waitlisted, that is single or multiple segments not confirmed, this still results in a significant GDS charge to the airline but delivers no revenue as there is no confirmed booking. Again this must be addressed before flight departure to minimise GDS costs to the airline.

So, what is the net result of the combination of these abuses to an airline? First, and perhaps the biggest impact, are increased no-shows and late cancellations. These are proven to be as high as 30 per cent on some routes. No-shows are of course an airline's biggest problem as a lost opportunity occurs with additional costs to the airline such as wasted catering and GDS costs. Also Revenue Management data are spoiled but good quality reservations data are essential for good forecasts to be produced. Therefore, significant forecasting error occurs resulting in a bad optimisation and a sub-optimal revenue mix in the inventory.

Lastly, another often unconsidered impact is a lower seat access level for the airline's best customers who usually book late and at high revenue. While overbooking can remedy some of these effects, simply increasing overbooking levels does not solve the problem in the long term, and in fact as data become less and less reliable the overbooking forecasts become

more vulnerable to sporadic hiccups resulting in offloads or heavy no-shows resulting in empty seats which may well have been possible to fill. This all indicates just how essential good, robust RI is for an airline wishing to maximise its revenue opportunity.

The benefits derived from good RI processes supported ideally by a system solution are:

- The Reduction of no-shows, offloads, down-grades and late cancellations.
- Improved seat access through the removal of bookings that would not materialise and deliver any revenue. This not only improves the bottom line but increases customer satisfaction levels.
- Better quality forecasts from stable reservations data delivering improved seatfactors and higher revenues and profitability.
- Cost reductions in areas of the operation, for example GDS fees, catering costs, customer service resource costs, more accurate matching of capacity to demand via the right aircraft for the right booked load and increased on time departures as flights are no longer delayed to wait for passengers on inbound flights who fail to materialise.

So how might one measure the benefits derived from applying RI? As you can see (Figure 1) simply by measuring the variance to a flight's yield and/or booked load factor before and after RI was applied is probably the simplest method of determining two different levels of benefit. Obviously there is a multitude of ways to measure the various benefits derived, but the key message here is to ensure that measurement of benefits is applied and constantly circulated to other key areas to underline the benefits and the return on investment (ROI).

From evidence gathered by the leading suppliers of RI solutions, and shared at the annual A.R.I.G. conferences, there is a general consensus that these systems produce some of the strongest ROI possible with typical results of around 30:1, though some reports show returns of over 200:1! A typical benefit to the airline is an improvement of 1 per cent on the company's gross revenue.

A few carriers have built in-house RI solutions, these usually prove difficult to maintain or not cost effective in the long term. Some airlines, typically in low cost areas such as Asia, still employ manually driven processes deploying large numbers of people to do multiple manual checks at various checkpoints. This is not to be recommended either, as it is not robust and can often cause more problems than doing nothing at all as sporadic cleansing creates unstable reservations data against which
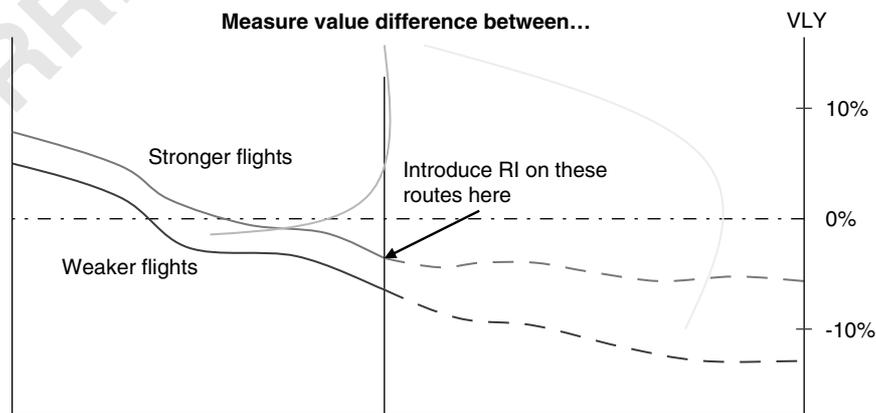

Figure 1: Yield factor or load percentage variance compared to last year

to forecast on in the RMS. Overall, the best two options are to either:

- *Outsource the problem to an external RI provider who employs a hosted solution*: This removes all the effort by the airline, so this option is well worth consideration as it is cost effective and delivers results quickly and effectively. It also requires no local IT support, avoids concerns over maintaining updates and bug fixes. It is usually very cost effective due to no upfront expenditure, with a monthly fixed fee being a typical method of charging the client. This is often most attractive to smaller airlines with smaller IT departments, or those wishing to focus on the operational approach to RI rather than both operational and an analytical focus.
- *Implement a licensed RI solution and employ a dedicated RI team locally*: The advantage of this option is that it maintains local control by the airline and allows an in–depth interrogation of the data. Reports can deliver important information for distribution to other key departments such as Sales, Marketing, Operations and Customer Service, as well as providing the normal RI type of reports. It does require local IT support and higher costs overall, but this may be acceptable to a medium to large carrier as the overall benefits delivered are usually higher.

The key message, whichever approach an airline takes is, just do something, as doing nothing is needlessly losing the airline money in an area which has proven remedies which deliver fast results at a very high ROI. Investment of this nature really should be considered a 'no-brainer' by airlines given the results at airlines who have implemented RI for some time and realised the huge benefits to be gained. It is no coincidence that the World's top ten most profitable airlines all have RI solutions in place!

So what is the subtle difference between Revenue Management and RI? Well as you can see (Figure 2), Revenue Management delivers benefits on the outside of the booking curve, from forecasting demand to come, no-shows and cancellation rates. While RI works within the booking curve on those bookings that have already been made on the reservations system by firming up the PNRs (Passenger Name Records or bookings) already made by validating if they are ticketed and if the booking adheres to the fare rules set.

I would also recommend to those airlines planning to implement Revenue Management to seriously consider employing a RI solution first, in order to cleanse the reservations data upon which a RMS has key dependencies. To those carriers already running a RMS, it is never too late to implement a RI solution which will improve your Revenue Management results and reduce yours costs considerably.

As well as providing consultancy to leading companies and airlines in the areas of Revenue Management and RI, I also chair and lead an independent organisation which is focused on the area of RI entitled *A.R.I.G.* (*A*irline *R*evenue *I*ntegrity *G*roup). This started with an initial seven airlines in November 1998 but has now grown to more than 103 companies, consisting of 84 airlines, three GDSs, and over 16 of the World's leading suppliers of RI and revenue recovery solutions. The total individual members exceeds 250 people involved in the areas of RI. Membership is free, as is the annual conference held every spring. This provides amazing value given that the subject matter is proven to deliver such beneficial results to its practitioners. The aims of the A.R.I.G. group are to:

- Facilitate best practice, share experiences through case studies and knowledge transfer.
- Cleanse industry problems to improve industry results.
- Raise awareness of RI opportunities and highlight the high ROI it offers.
- Provide a stage to software vendors to promote their system solutions as a quick
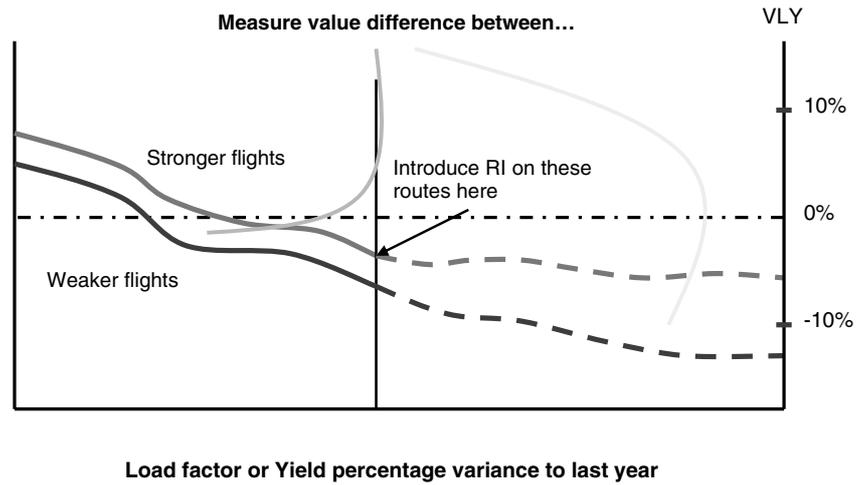
Measure value difference between…   VLY

Load factor or Yield percentage variance to last year

Figure 2: RI measures

path for airlines to see all of the solutions in one place.

• Work with GDS's to apply RI disciplines at source, rather than after the booking process has taken place.

The A.R.I.G. website can be located at www.arigroup.org which contains previous meeting's outputs, a membership directory, future events diary, industry news and various other items of interest. Membership of A.R.I.G. is open to all airlines, GDSs and software suppliers and is operated on a no-profit basis, with meetings being fully sponsored by our supplier members. To date, we have held meetings throughout the World, our last meeting being held in Maui in March. Plans are underway for our next meeting in spring 2008 in Amsterdam.