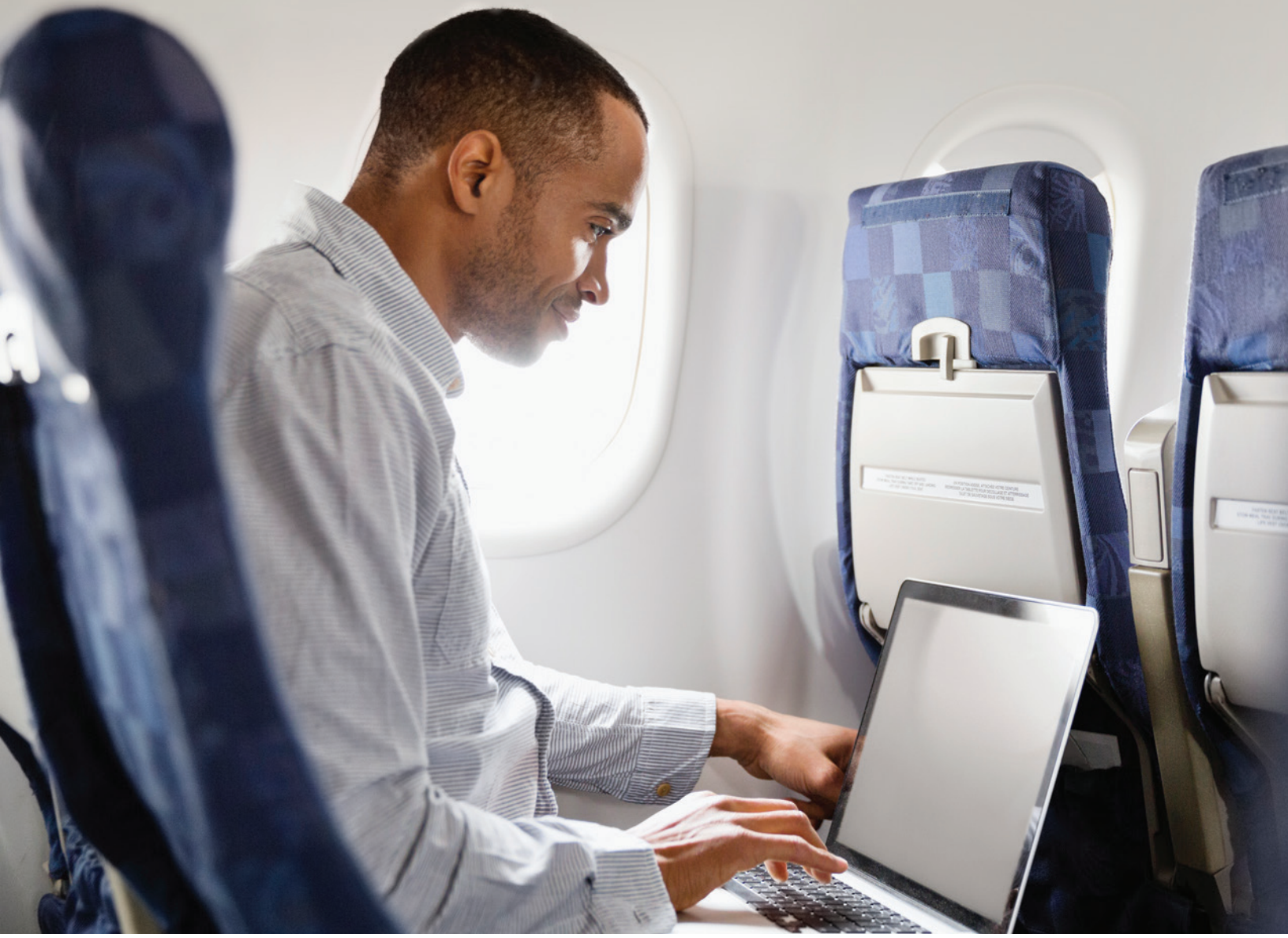
WHITEPAPER

Improving Airline Passenger Loyalty With Today's Connectivity



Published by

VALOUR CONSULTANCY

In association with

INTELSAT

INTRODUCTION

Countless whitepapers, studies and technical analyses of the connected aircraft have published in recent years. Much of these – including our very own research here at Valour Consultancy – have tended to focus primarily on the potential for airlines to realise cost savings through deployment of various connected aircraft applications. Very few papers have zeroed in on the many ways in which connectivity can be used to indirectly enhance the on-board experience, drive passenger loyalty and boost revenues via increased ticket sales and repeat business. And that's precisely the angle this paper takes.

This goes beyond simply offering in-flight connectivity (IFC) for free, which has been demonstrated to have a positive impact on an airline's Net Promoter Score (NPS) – a loyalty metric that measures a customer's willingness to not only return for another purchase, but also make a recommendation to their family, friends or colleagues. JetBlue's Chief Digital and Technology Officer, Eash Sundaram, for example, credits the airline's FlyFi product with having boosted NPS[1]. QANTAS has also witnessed improved NPS for in-flight entertainment (IFE) on Wi-Fi equipped 737s[2], while Delta Air Lines has spoken recently about plans to one day make in-flight Wi-Fi available for free. Unlike these big carriers, however, the majority of airlines are still not ready, willing or able to go down the free Wi-Fi route. But that doesn't mean that there aren't other ways for connectivity to positively impact the passenger experience.

While efficiency gains are compelling in theory, many airlines are still in the very early phases of adoption and there exists little in the way of tangible metrics that show how quickly a return on investment (ROI) can actually be achieved. When we surveyed the airline community[3] earlier this year and asked how they currently measure, or plan to measure ROI from connected aircraft applications, "passenger satisfaction metrics" was ranked as the number one choice.

Tara Bamburg, Manager of Inflight Wi-Fi and Entertainment at Southwest Airlines backs this up; "When we first adopted Ku-band satellite connectivity back in 2009, our intent was for it to be used by passengers to access the Internet. Today, while there are numerous connected aircraft applications we'd love to adopt and will do so in future, our primary focus remains on ensuring that the browsing experience is the best it can be". Another airline, which preferred not be named, agreed and added: "Connectivity take rates across the industry are not at a point where airlines are making a profit and at this stage, it is hard to justify expensive investment in connected aircraft applications on top of the multi-million-dollar cost of installing Wi-Fi for passengers, who are our priority".

Indeed, it's all too common for passengers to bemoan the lack of Wi-Fi connectivity, or complain about poorly performing Wi-Fi when answering NPS surveys. What's more, bandwidth costs for operational usage of passenger connectivity tend to come out of the customer experience budget and there can be disagreements on which application should take priority when it comes to the sharing of what is essentially a finite connectivity pipe. Airline departments are notorious for being quite siloed in their thinking and this is a factor that has long been identified as an inhibitor of connected aircraft growth. It therefore makes sense to focus on the indirect ways in which connectivity can be utilised to improve the passenger experience and can do so in a relatively inexpensive manner.

This is especially the case given that loyal customers tend to have a more than proportionate effect on an airline's bottom line.

American Airlines reported in 2015 that half of its revenues came from just 13% of passengers – passengers who were said to generate on average of 6.7 times more money for the company than the "commodity" flyers who flew with them one time per year or less[4].

There lies a huge opportunity in trying to convert these non-loyal customers by improving the passenger experience.

An added focus of this whitepaper concerns the infrastructure that powers connected aircraft applications. To this end, the sections that follow draw not just on the input of airlines, but of satellite operators, IFC service providers and equipment vendors, too.

Figure 1: Growth in IFC-Equipped Commercial Aircraft (2014 – Q2 2019)

Five Easy Wins to Increase NPS and Drive Customer Loyalty

The proliferation of smart connected crew devices promises to bring to the air all the benefits of normal customer service that we've become accustomed to on the ground. Indeed, **"surprise and delight"** campaigns that seek to attract and nurture customers by enhancing interactions with them and offering them unexpected rewards are common marketing strategies designed to promote customer loyalty, reduce churn and increase profitability. However, such approaches have only just started to catch on amongst the airline community.

Things like simple, personalised greetings upon boarding the aircraft and various other little touches can go a long way towards making a passenger feel appreciated and even inspire heartfelt customer advocacy in a price-sensitive industry not known for rave reviews. JetBlue Airways customer-turned-evangelist, Paul Brown, refers to the airline as the "love of my life" since a half-serious tweet asking whether his frequent flyer status (140,000 miles over two years) came with a Starbucks delivery was answered with a flight attendant hand delivering him a venti mocha on the plane. The addition of reliable connectivity to a crew's armoury can help take this surprise and delight strategy to the next level.

1. Enabling Worry-Free Travel with Connected Crew Devices

British Airways' flight attendants have just received brand-new iPhone XR smartphones that are already being credited with transforming customer service. "Recently, when a passenger realised that he had for-gotten to order a special meal, he was really impressed when I quickly took out the phone, logged onto ba.com and ordered a meal for his return journey – all within a matter of minutes in the middle of the flight" said Bradley Smith, one of the first to receive the device.

Taking the stress out of travel is another area in which airlines can make a huge difference to the passenger experience.

Oscar Munoz, CEO of United Airlines, accurately sums this up: "It's become so stressful. From when you leave, wherever you live, to get into traffic, to find a parking spot, to get through security. By the time you sit on one of our aircraft, you're just pissed at the world[5]." So, it stands to reason that when a flight is delayed, cabin crew could, for example, seek out and pro-actively rebook those passengers that will miss their connecting flight en route using their connected devices. This, as opposed to having passengers worry about a mad dash to the airline's customer service desk at the airport to find an alternative flight, is an incredibly powerful tool.

Continuing with the connecting flight example, there's no reason why crew with a connected device could not inform a passenger that their bag didn't make it on the second leg of their journey. But rather than leave it at that, it's possible to take a forwarding address and assuage any doubts the passenger might have about their bag not making it to the end destination. "Using connectivity to move a problem forward when the passenger is stuck on-board the aircraft in this way gives them time to consider their options", says Jags Burhm, Senior Vice President of Aero and Global Mobility at Eutelsat.

2. In the Moment Care

In an effort to reward high value passengers, United Airlines initiated its own surprise and delight programme in 2015. Though much of its approach consists of simple things like commemorating anniversaries of frequent flyer memberships being reached, the airline has also demonstrated its intent to go "above and beyond" for customers. By publicly displaying its strong appreciation for their loyalty on social media and taking immediate action to right wrongs such as flight delays or poor service, United has managed to turn negative interactions into positive ones. This "in the moment" care comes thanks to a connected crew app that allows flight attendants to provide customers with on-the-spot goodwill gestures like air miles and travel credits.

Interestingly, United has found that solving problems in this way has actually increased passenger satisfaction more so than someone that had a perfect flight.

JetBlue has also found that problematic experiences fixed quickly and efficiently will score a brand higher than the person who had a flawless experience.

The airline believes that in order to turn a crisis into customer advocacy, it is necessary to "break the schema" and do something that's completely the opposite of what the customer expects.

For some passengers, a "crisis" could well be an inability to connect to their VPN when using in-flight Wi-Fi. Rather than just dismiss a frustrated tweet regarding this very issue, JetBlue's social media team instead reached out to the customer to get more details and then contacted the satellite provider behind the connectivity service – Viasat – to provide a solution. Thus, a disgruntled customer ended up being blown away by JetBlue's immediate and helpful response. Providing the very best service to customers while they are in the air has a huge impact on the overall on-board experience and is what sets airlines apart from one another – especially on those long journeys when passenger and crew have the opportunity to become well-acquainted over a period of several hours.

3. Serving Passenger Needs End-to-End

Passengers will become increasingly accustomed to on-board solutions that help ease their anxiety about what follows when they depart the aircraft. Knowing that it is possible to use connectivity to book onward travel whilst in the air obviates the worry of say, needing to find the taxi rank in an unfamiliar airport environment and the uncertainty of what said journey might cost. FlightPath3D, best known for its highly interactive, 3D moving maps, which feature on a growing number of seatback and wireless IFE systems, is primed to help airlines ease these anxieties and at the same time, tap into so-called "aircraft-to-door" ancillary revenue opportunities. Its Travel Planner allows passengers to view and book ground transportation options with partners like Uber while they are flying. And thanks to various API integrations and partner agreements, it is possible to obtain a plethora of real-time information on things like queue times in security and in baggage reclaim, as well as live traffic conditions for the onward route.

According to SITA's 2019 Passenger IT Insights survey, the use of on-board technology for entertainment or productivity actively contributes to a positive passenger experience with respondents expressing an average customer satisfaction score of 8.3 out of 10[6]. It follows then that any airline able to take the hassle out of booking onward travel in this way would likely also score highly in NPS surveys.

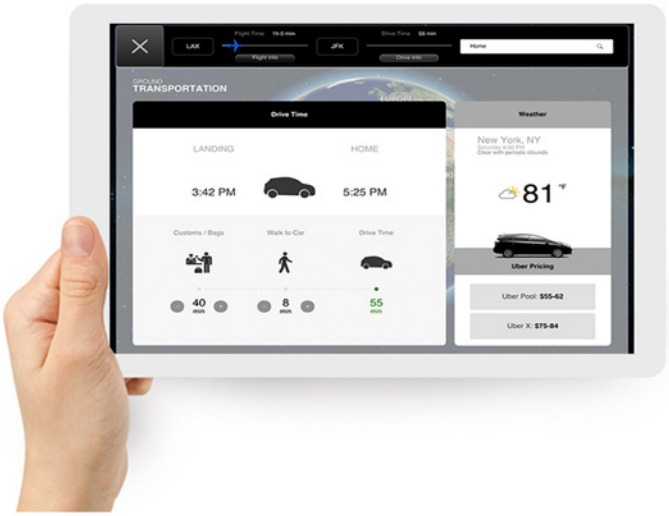


Figure 2: Create Personalized Travel Plans with FlightPath3D's Travel Planner

4. Managing Expectations the Right Way

With take rates for in-flight Wi-Fi in the single digits when a paid model is in place, it's crucial that those passengers that do want to connect are able to do so easily and that they can also enjoy as seamless a browsing experience as possible. Unfortunately, it's all too common for passengers to encounter difficulties when trying to navigate the log on page and many simply give up before they're able to even pay for a session pass. For this reason, Global Eagle's new captive portal enhancement that automatically connects users to on-board wireless networks has resulted in a 40% increase in the number of devices accessing the IFC portal on Southwest Airlines since its launch in Q1 2019.

In explaining the decision to implement captive portal, Mike Pigott, the company's Senior Vice President of Connectivity Products and Solutions says that prior to launch "It was a common theme for one passenger on-board to become quite vocal about being unable to connect and because of this, there's not much that cabin crew could do to resolve the problem except reset the system for everyone". It goes without saying that this results in a greater number of disgruntled passengers and all because the sign-up process was less intuitive than it could have been. Airlines with multiple service provider partners face similar issues and some have taken steps to unify the various user interfaces to ensure a consistent log-in experience across those systems. United Airlines, which uses connectivity from three different providers – Gogo, Panasonic Avionics and Thales/Viasat – is a prime example.

This logic can be extended to how airlines can best manage passenger expectations when using in-flight Internet. Even with the best will in the world, sessions can be disrupted for a variety of reasons such as during a satellite beam switch, when regulation prohibits use over a particular jurisdiction, or even in heavily congested areas where there is insufficient bandwidth to go around. However, the average passenger has no awareness of such things, let alone the technological feat involved with providing connectivity to a metal tube flying at 500 mph, 35,000 feet above the surface of the earth. They simply want connectivity to work and are frustrated when it doesn't function as expected – even more so than if there were no connectivity on board at all.

As succinctly surmised by Karthik Bharathan, Gogo's Director of Product Management, "When a passenger buys a session pass, there's no indication as to where and how long it will work. It's not like a cellphone when you can see signal strength". Cognisant of this, forward-thinking airlines like Air Canada are looking at how to inform passengers when there will be a drop in service ahead of time. "It can be common to lose connectivity when flying over the earth's poles and because of this, we're looking at a type of early warning system that would give passengers advance notice via the seatback screen that their session will be disrupted, allowing them to prepare for that eventuality and to save any work they might be in the middle of," says Kevin So, Product Manager, IFE and Connectivity at Air Canada.

Again, these little touches are possible with today's connectivity solutions and can go a long way towards making a passenger feel less like a number and more like a valued customer and thus, drive loyalty to the airline brand.

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5. Passenger Comfort

Airlines are notorious for annoying their passengers. And unfortunately for the industry, it might be argued that much of what drives passenger experience – the weather – is beyond anyone's control. But is it? Huge potential lies in the ability to foresee and avoid turbulence with each incident estimated to cost airlines between $28,000 and $167,000, or some $100 million each year[7]. These costs are attributable to increased fuel burn, flight delays, damage to the plane and injuries sustained by passengers and crew.

Real-time weather and automated turbulence reporting delivered through in-flight Internet could help soothe anxiety levels.

93% of passengers surveyed by Gogo reported that knowing a pilot has access to real-time weather information would put them at ease[8].

And in the same way that there is benefit to informing passengers when Wi-Fi service is likely to be disrupted, passengers would also likely appreciate some kind of enhanced turbulence warning – which could be delivered to a seatback screen or PED in advance of the event occurring – to obviate what may seem like the trivial frustration of having to plan bathroom breaks and overhead compartment visits around the seatbelt light and improve upon the current situation whereby passengers are informed about turbulence via the PA system when it is actually happening.

As a result, several airlines are beginning to take the initiative and exploit the low-hanging fruit that is connectivity-enabled live weather. Delta Air Lines, for example, has built its own iPad-based app, Delta Flight Weather Viewer, which forecasts and then indexes the severity of patches of turbulence. The app benefits from gathering and analysing a vast amount of data points from sensors onboard hundreds of aircraft, all sent via the passenger Wi-Fi system. Thanks to these efforts, Delta is the only airline to have recorded decreased encounters with higher-level turbulence in the last three years. Because of this and the added investment of an in-house meteorology team, it was also the last airline to operate commercial flights in and out of San Juan airport in 2017, despite the threat posed by Hurricanes Irma and Maria, and has been able to restart service at closed airports more quickly than its rivals[9].

Figure 3: Apps like the Delta Flight Weather Viewer use Passenger Wi-Fi to Enhance the On-board Experience

Possibilities Today and on the Horizon

All of this has been made possible by a confluence of several factors. Cabin crew and those in the flight deck are increasingly being furnished with tablets and smartphones and on these devices sit a growing library of interactive applications that promise to re-shape airline businesses and reinvent the passenger experience. Many of these applications need no longer rely on the limited functionality and expensive nature of ACARS and can instead take advantage of the step change in bandwidth provided by passenger IFC solutions on offer from service providers like Gogo, Panasonic Avionics, Global Eagle, SITAONAIR, Thales, Viasat, Inmarsat and others.

Thanks to the launch of numerous high-throughput satellites (HTS), there is now an abundance of capacity spanning the vast majority of flight routes to deliver these services, while also satisfying passengers' ever-increasing demand for data. And because global satellite operators like Intelsat and SES have blanketed the earth with multiple layers of wide-beam and spot-beam capacity, these service providers can rely on networks to not only provide high-density coverage where it is needed most, but also a high-degree of redundancy should bandwidth become congested or an asset encounter difficulties. The uniform coverage of Inmarsat's Global Xpress (GX) constellation and the forthcoming Viasat-3 platform can reduce the risk of passengers becoming frustrated by wildly differing experiences across flight segments.

As Mark Richman, Director, Product Management, Mobility at Intelsat rightly states: "Airlines want to provide gate to gate coverage and consistent service. They need to have the confidence that the network is reliable, and they need enough coverage and capacity along their specific routes to service their entire fleet." With new LEO and MEO constellations on the horizon, redundancy and resiliency will be bolstered even further.

In the same way that overall capacity has grown, consistency of service across flight routes provided by newer global constellations represents a critical improvement on the somewhat erratic performance of patchwork solutions in years gone by. Passengers don't care about the underlying technology and whether they are connecting to an L-, Ku- or Ka-band satellite, or to cellular towers on the ground, or how many megabits per second (Mbps) of throughput a solution can support. They just want things to work and for them to work well. In-flight Wi-Fi that does not work the same in all regions and all conditions is arguably more frustrating than offering no in-flight Wi-Fi at all.

While satellite technology continues to improve with the advent of new software-defined satellites that allow capacity to be instantaneously reconfigured and repositioned in response to ever-changing customer demand, so too does the requisite on-board hardware. In order to eliminate so-called choke points and make the very best of available bandwidth, service providers have brought to market next-generation modems capable of delivering significantly improved throughput, intelligent WAPs with the ability to take their environment into account and better manage available resources, as well as more powerful server units with multi-core CPUs and additional system memory. The result is an architecture primed to efficiently manage the increased operational dataflows necessary to deliver customer satisfaction.

All this being said and despite the growing number of connected aircraft, very few airlines have taken advantage of the easy wins outlined in this paper. Siloed thinking, a focus on getting passenger Internet right and a perception that all connected aircraft applications are costly and therefore difficult to justify have all held back adoption.

Key Takeaway

Little touches go a long way and with minimal additional investment, airlines can drive greater passenger satisfaction, which results in repeat business, increased ticket sales and higher average transaction values. This, we believe, is the way in which IFC needs to be framed and not through the rather myopic view that concentrates solely on the sale of Wi-Fi session passes, or often unrealistic connectivity-driven cost savings. The easy wins noted previously that point to the ways in which connectivity can take the stress out of travel are achievable thanks to the intelligent design of today's connectivity infrastructure, which at its heart features high-capacity satellite constellations offering consistent, reliable coverage across the globe and built-in redundancy to mitigate the risk of a poor passenger experience.

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