MAXIMIZING ANCILLARY REVENUE
THE POWER OF ANALYTICS FOR AIRLINES

DECISION POINT™
— by **WNS**

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Overview

After bouncing back from a global downturn, airlines now have the formidable task of protecting their bottom lines in the face of tough headwinds such as labor costs and maintenance of old fleet. Airlines will need to curb the erosion of revenue and increase it via ancillary products through direct (airlines' websites) and indirect channels (travel agencies). With booking volumes through travel agencies predicted to drop from 67 percent in 2016 to 55 percent by 2021, it's imperative for airlines to find ways to maximize the ancillary revenue through this channel.

The introduction of New Distribution Capability (NDC), a new XML-based data transmission standard, will help airlines in this direction by enhancing the communication between airlines, travel agents and travelers and allow airlines to:

- Construct comprehensive offers

- Lower the time-to-market of ancillary offers

- Increase the scope of personalized offers

To push customized ancillary offers through travel agents, it's now more critical than ever for airlines to leverage the power of analytics. With analytics, they can assess customers' overall purchase and spend patterns around ancillary products/services by drawing insights from the booking data extracted from their websites and travel agencies.

WNS DecisionPoint™ recommends the **Comprehend Your Customer Framework** to analyze the past and present behavior of customers. Through this approach, airlines can utilize various forms of analytics and link different data fields such as order history, shopping and customer profiles (from airlines' databases) in order to:

- Sharpen their understanding of customers' behavior. For instance, by understanding the correlation between their willingness to pay for ancillary products and duration of flight, age, gender, number of travelers, airlines can identify the precise customer preferences. They can also eliminate the behavior patterns in which customers exhibit a rare deviation in relation to ancillary products/services.

- Segment customers based on the frequency of flying, spend per booking and spend on ancillary products

WNS DecisionPoint™ proposes an **Ancillary Revenue Maximization Matrix** to segment customers into four distinct classes, utilize predictive analytics to forecast customers' future behavior and personalize initiatives to engage customers at various stages of their journey.

By 2020, the potential for ancillary revenue growth in the airline industry is expected to touch USD 130 billion. But to maximize ancillary revenue, airlines will need a better understanding of customer behavior. In this effort, analytics can help airlines draw insights from customer data which in turn can be used in conjunction with the New Distribution Capability data transmission standard ("NDC standard") to improve impact of ancillary offerings on customer engagement, choice, and satisfaction and on total revenue.

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REDEFINING INTERACTIONS WITH TRAVELER

Accelarated growth in aviation fuel prices in 2008 resulted in high operating cost for airlines which was compensated by increase in ticket prices. Meeting resistance from price - sensitive customers, airlines sought solace from ancillary revenue – a means to maintain steady top line without intimidating customers. This shift in airlines' business model is making customers focus more on 'value' as against 'price' and which positively affects their satisfaction as well. Passengers engaging in shopping in-flight had 3% to 5% higher passenger experience scores than the overall average of 73%, according to Airline Passenger
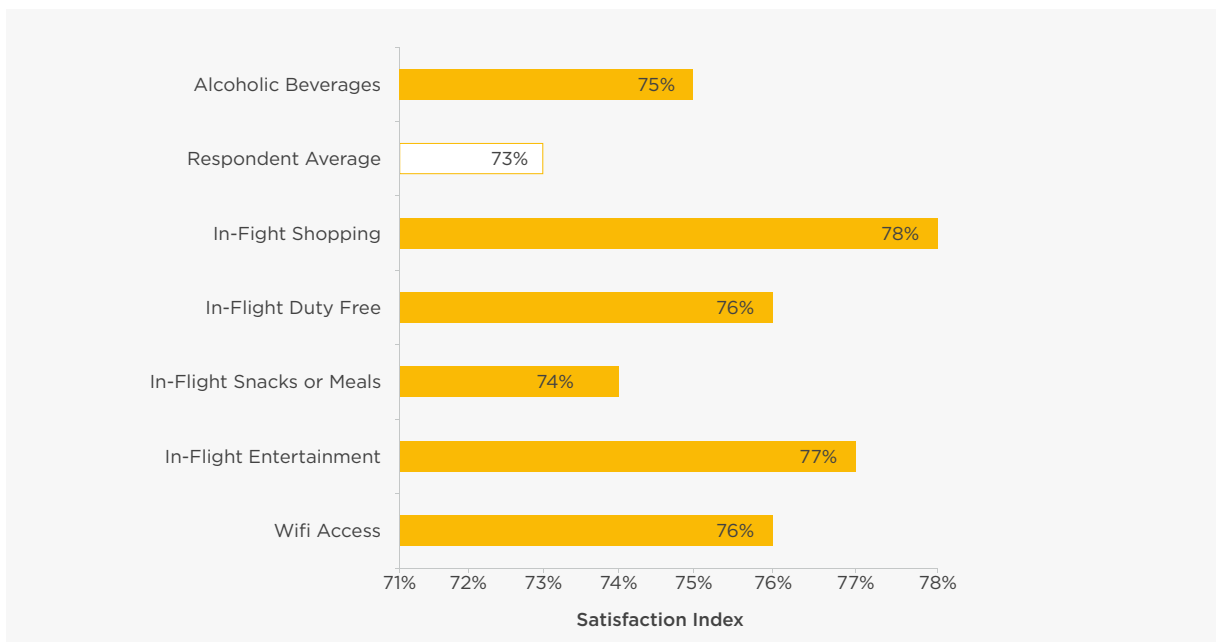
Experience Association's passenger insights study in 2014[i] (Exhibit 1). Success of this model is supported by the fact that ancillary revenues worldwide grew by more than 160%[ii] from 2010 to 2015.

What if airlines could create more opportunities with ancillary products/services to take customer satisfaction a notch up? What if airlines could offer a wider range of ancillary products/services to customers directly at the time of 'booking' tickets? This would not only aid customers' decision making and trip planning but turn away the spotlight from 'lowest fare'[iii] option while choosing an

airline. Since limited ancillary products can be offered for purchase 'in-flight', offering ancillary products at the 'booking' stage increases chances of sales conversion. But for this to happen, airlines need to move away from offering 'same for all' ancillary products and start personalizing offers. However, in order to succeed in such an attempt, the very first step for airlines would be to understand customer behavior and segment them into various groups that can be then targeted for effective allocation of marketing spend.

Exhibit 1

Effect of In-flight Ancillary Products on Overall Passenger Satisfaction
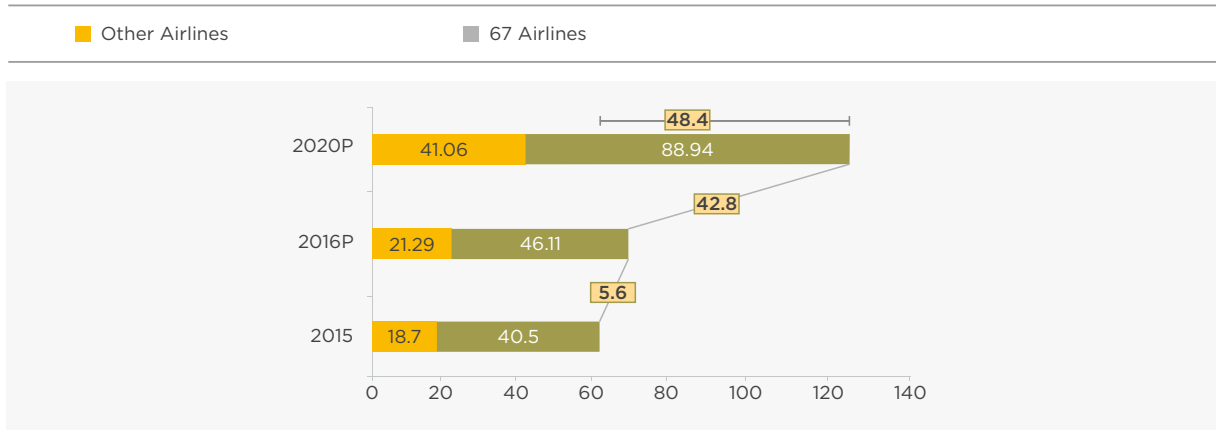

Source: Airline Passenger Experience Association

Amadeus predicts that by 2020, revenue from ancillary products and services is expected to reach USD 130 billion[iv.] In 2015, 67 global players accounted for USD 40.5 billion in revenue from ancillary services[ii]. Considering the same break-up of ancillary revenue between these 67 airlines and other airlines in the future, there lies a growth opportunity of ~USD 48 billion for these 67 airlines by 2020 (Exhibit 2).

Exhibit 2

Current and Predicted Ancillary Revenue (in USD Billion)

Legend: ■ Other Airlines   ■ 67 Airlines

Year	Other Airlines	67 Airlines	Gap
2020P	41.06	88.94	48.4
2016P	21.29	46.11	42.8
2015	18.7	40.5	5.6

(x-axis: 0, 20, 40, 60, 80, 100, 120, 140)

Source: IdeaWorks Company, Travelport, Amadeus, WNS DecisionPoint™ Analysis

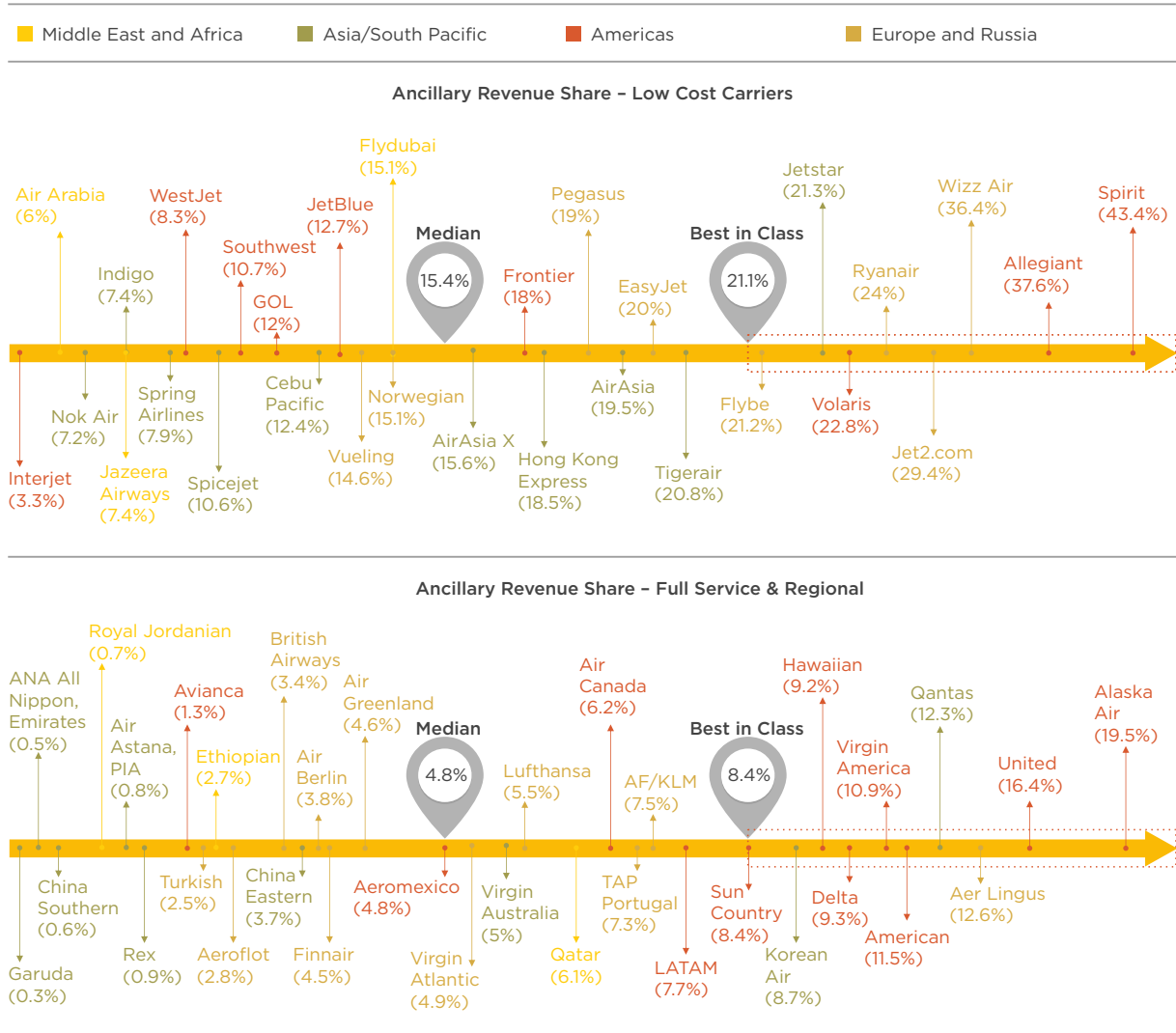Ancillary revenue data for 2015 was divided into two segments, low cost carriers and full service & regional carriers; and analyzed to understand the industry trend. Exhibits 3 and 4 show the relative position of 67 airlines as far as ancillary revenue share is concerned.

Exhibit 3

Ancillary Revenue Share – Low Cost Carriers and Full Service & Regional

■ Middle East and Africa ■ Asia/South Pacific ■ Americas ■ Europe and Russia

Ancillary Revenue Share – Low Cost Carriers

Air Arabia (6%), Flydubai (15.1%), Pegasus (19%), Jetstar (21.3%), Wizz Air (36.4%), Spirit (43.4%), WestJet (8.3%), JetBlue (12.7%), Southwest (10.7%), GOL (12%), Indigo (7.4%), Frontier (18%), EasyJet (20%), Ryanair (24%), Allegiant (37.6%)

Median 15.4%, Best in Class 21.1%

Nok Air (7.2%), Spring Airlines (7.9%), Cebu Pacific (12.4%), Norwegian (15.1%), AirAsia (19.5%), Flybe (21.2%), Volaris (22.8%), Interjet (3.3%), Jazeera Airways (7.4%), Spicejet (10.6%), Vueling (14.6%), AirAsia X (15.6%), Hong Kong Express (18.5%), Tigerair (20.8%), Jet2.com (29.4%)

Ancillary Revenue Share – Full Service & Regional

Royal Jordanian (0.7%), British Airways (3.4%), Air Greenland (4.6%), Air Canada (6.2%), Hawaiian (9.2%), Qantas (12.3%), Alaska Air (19.5%), ANA All Nippon, Emirates (0.5%), Avianca (1.3%), Air Astana, PIA (0.8%), Ethiopian (2.7%), Air Berlin (3.8%), Lufthansa (5.5%), AF/KLM (7.5%), Virgin America (10.9%), United (16.4%)

Median 4.8%, Best in Class 8.4%

China Southern (0.6%), Turkish (2.5%), China Eastern (3.7%), Aeromexico (4.8%), Virgin Australia (5%), TAP Portugal (7.3%), Sun Country (8.4%), Delta (9.3%), Aer Lingus (12.6%), Garuda (0.3%), Rex (0.9%), Aeroflot (2.8%), Finnair (4.5%), Virgin Atlantic (4.9%), Qatar (6.1%), LATAM (7.7%), Korean Air (8.7%), American (11.5%)
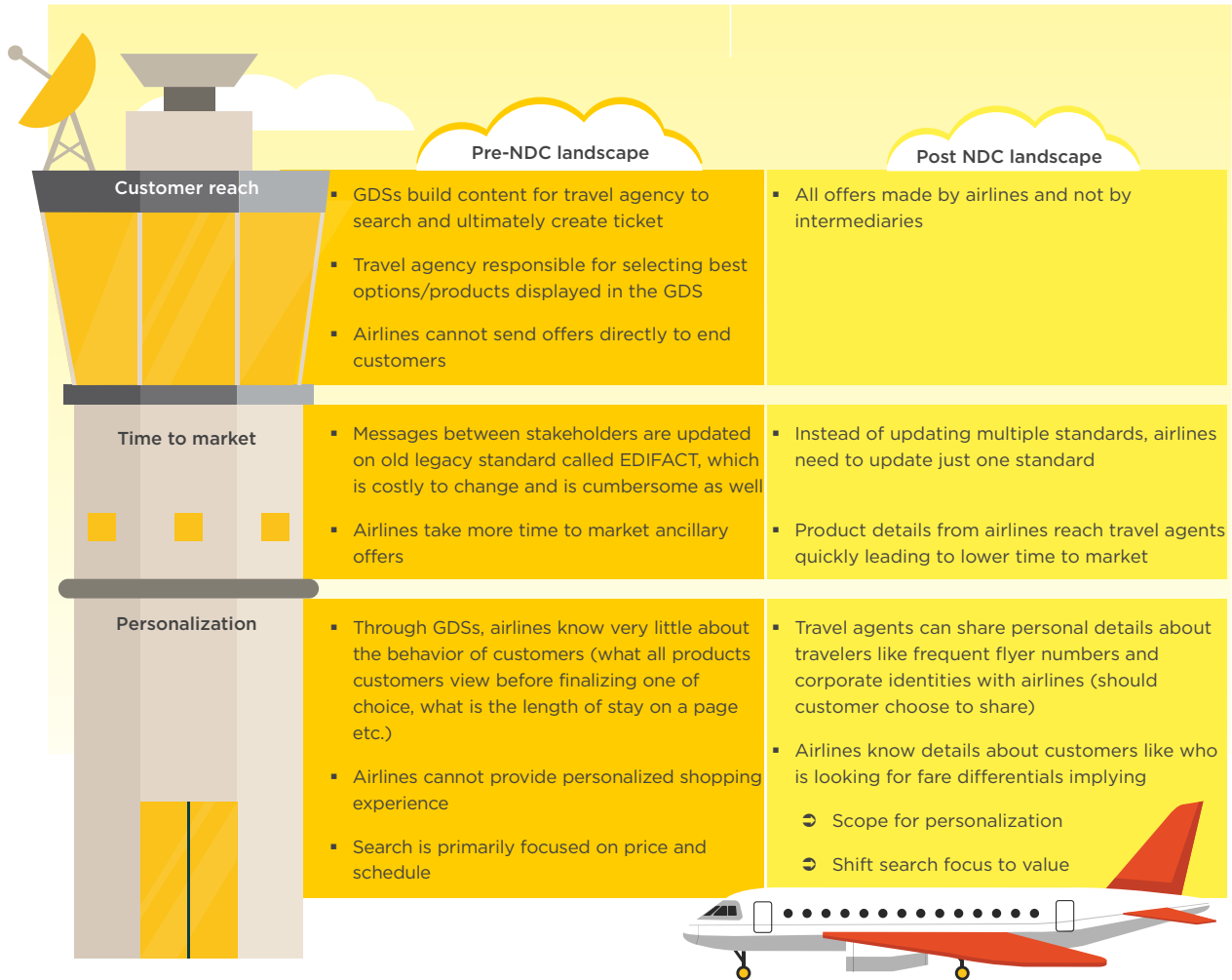
Source: WNS DecisionPoint™ Analysis

Airline tickets can be booked directly through airline websites or through travel agencies like Online Travel Agents (OTA) or Travel Management Companies (TMC). In the wake of a predicted decrease in booking volumes through travel agencies from 67% in 2016 to 55% by 2021[vi], airlines need to maximize ancillary revenue through this channel. Airlines need to leverage the New Distribution Capability (NDC) program launched by International Air Transport Association (IATA). The new XML-based data transmission standard will enhance communication between airlines, travel agents and travelers, which will allow airlines to construct a comprehensive offer themselves, even through indirect channels (Exhibit 4). The program will provide opportunity to revolutionize end-to-end airline distribution functions, namely shopping, booking and servicing, payment and ticketing, airline profile, interlining and reporting, settlement and accounting.

Exhibit 4

Opportunity for Airlines post NDC

	Pre-NDC landscape	Post NDC landscape
Customer reach	▪ GDSs build content for travel agency to search and ultimately create ticket ▪ Travel agency responsible for selecting best options/products displayed in the GDS ▪ Airlines cannot send offers directly to end customers	▪ All offers made by airlines and not by intermediaries
Time to market	▪ Messages between stakeholders are updated on old legacy standard called EDIFACT, which is costly to change and is cumbersome as well ▪ Airlines take more time to market ancillary offers	▪ Instead of updating multiple standards, airlines need to update just one standard ▪ Product details from airlines reach travel agents quickly leading to lower time to market

Personalization	▪ Through GDSs, airlines know very little about the behavior of customers (what all products customers view before finalizing one of choice, what is the length of stay on a page etc.)
	
	▪ Airlines cannot provide personalized shopping experience
	
	▪ Search is primarily focused on price and schedule
		▪ Travel agents can share personal details about travelers like frequent flyer numbers and corporate identities with airlines (should customer choose to share)
		
		▪ Airlines know details about customers like who is looking for fare differentials implying
		
		  ➲ Scope for personalization
		
		  ➲ Shift search focus to value

Source: WNS DecisionPoint™ Analysis

In a perfect world, with NDC, airlines would have data about their customers even when bookings are made through travel agents. This will provide airlines ample opportunities to personalize ancillary products. As an example, take Amy (32) and her son, Sam (6). Amy is at a supervisory level in a health insurance company, visits Auckland every year this time and carries excess luggage. They are flying from London to Auckland in June 2017. Pre NDC, airlines would have taken a cookie cutter approach and provided traditional ancillary products and services like seat preference and extra baggage to Amy when she books her tickets through an Online Travel Agent (OTA) (Exhibit 5). Taking a liberal estimate, the airline might have earned USD 95 from this duo through this channel.

Exhibit 5

Ancillary Revenues | Pre NDC

▪ Offered Services	▪ Accepted Services	▪ Offered by Airline	▪ Offered by OTA

Ancillary revenue before the implementation of NDC with traditional ancillary products like seat preferences, meal choices provided by the airlines; hotels, car rental, excursions by OTAs to customers

Traditional Services/Products

	▪ One Way		▪ Round Trip	
Class and Fare	▪ Economy	▪ $ 1334	▪ Economy	▪ $ 1832
	▪ Premium Economy	▪ $ 1970	▪ Premium Economy	▪ $ 2519
	▪ Business	▪ $ 2842	▪ Business	▪ $ 4390
	▪ First	▪ $ 6580	▪ First	▪ $ 9386

Meal Preference	▪ Child Meal
	▪ Japanese-style
	▪ Low Fat/Cholestrol
	▪ Non-vegetarian
	▪ Pure Vegetarian

Ancillary Services	Total Ancillary Revenue Earned by Airline = $ 75
Seat Preference — ▪ Window	Free
▪ Aisle	
Extra Baggage — ▪ 1st extra bag = $75	$ 75
▪ 2nd Extra and Subsequent Bags = $25	
▪ Overweight Bags (23-32 kg) = $75	
Car Rental — ▪ $ 67.13/Day	$ 67.13
Hotel — ▪ 3 Star Hotel/Day = $90	
▪ 4 Star Hotel/Day = $145	
▪ 5 Star Hotel/Day = $230	

Source: WNS DecisionPoint™ Analysis

Using information about Amy-Sam post NDC, airlines can simulate three scenarios (Exhibit 6) ranging from conservative (Option I) to aggressive (Option III) which could potentially affect their revenues from ancillary products and services by ~7% (Option I) to ~9% (option II) to ~40% (Option III). With the implementation of NDC, airlines can offer innovative ancillary products through OTAs depending upon the need of customers like providing an option to book a vegetarian meal by a star chef by paying a small premium, offering an in-flight library to rent or buy books from or providing the facility to shop online in-flight.
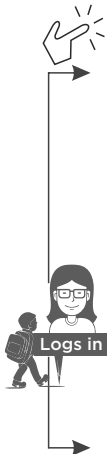
Exhibit 6

Ancillary Revenues | Post NDC

- Offered Services
- Offered by Airline
- Offered by OTA
- Accepted Services - Option I
- Assured Acceptance
- Accepted Services - Option II
- Accepted Services - Option III

Ancillary revenue post implementation of NDC from customer specific ancillary products like dynamically priced extra baggage, seat preferences (like twin seat) based on past purchase behavior and customer needs, traditional ancillary products like Wi-Fi and innovative services like library in-flight, combo deals

Traditional Services/Products

	One Way		Round Trip	
Class and Fare	Economy	$ 1334	Economy	$ 1832
	Premium Economy	$ 1970	Premium Economy	$ 2519
	Business	$ 2842	Business	$ 4390
	First	$ 6580	First	$ 9386

Meal Preference	Child Meal
	Japanese-style
	Low Fat/Cholestrol
	Non-vegetarian
	Pure Vegetarian

Logs in

Backend	

• Mother (32)- son (6) duo
• Amy is part of junior management cadre
• Visits Auckland every year this time
• Carries excess luggage
	• Dynamically priced extra baggage - Offered at slightly lower price based on her past transactions
	• Combo offers - Meals might go well with the food preference of her son
	• Offered
	  ◦ Seat preference as a practice
	  ◦ Wi-Fi as a practice
	  ◦ In-flight library - new introduction

Ancillary Services

Total Ancillary Revenue

Services/Products Offered During Booking	In-flight metal	Bacon & Cheese Burger-Meal	$8
		Chicken Sandwich-Meal	$8
		Big Fish Sandwich-Meal	$7
		Macaroni & Cheese-Meal	$7
		Oreo or Red Velvet Shake	$4
	Combo Meal	Two Oreo Shake + Two Chicken Sandwich Meal + 2 hour Wi-Fi	$33 **Special Offer**
Services/Products Offered During Booking and in Airport	Seat Preference	Window with extra leg room	$130/Seat
		Aisle with extra leg room	$110/Seat
		Twin seat	$35/Seat
	Extra baggage	1st extra bag	$70 **Dynamic Pricing**
		2nd extra and subsequent bags	$25
		Overweight bags (23-32 kg)	$70
Services/Products Offered During Booking and In-flight	Wi-Fi	1 Hour	$5
	In-flight library -through Kindle app on tablet devices	1 Book/Magazine	$2 for entire flight duration

Total Ancillary Revenue

Option I
No other ancillary product/service selected
1st extra bag = $70

Option II
Chicken Sandwich - Meal = $8
Oreo or Red Velvet Shake = $4
1st extra bag = $70

Option III
Twin Seat = $70
1st extra bag = $70

Source: WNS DecisionPoint™ Analysis

However, in case of partial onboarding of stakeholders in NDC, airlines will have exposure to limited customer data on bookings made through travel agents. Nevertheless, insights from customer data obtained from bookings made directly from airline websites and restricted data available from bookings made through travel agents, together, can help airlines ascertain customers' overall purchase and spend pattern of ancillary products/services. Airlines can accordingly push customized ancillary products/ services when a search is made through travel agents. For products searched directly on airline websites, enough and more data is available to identify customer purchase and spend trends and serve "identified" and "non-identified" customers distinctly with personalized offers.

INSIGHTS FROM OTHER SERVICE INDUSTRIES

The hotel, retail and entertainment industries have broad similarity with the airline industry in more ways than one. Firstly, they all provide services directly to consumers. Secondly, with consumers' expectations related to the service industry growing, the presence of substitutes vying for attention and loyalty and technology companies catalyzing development, these sectors are under tremendous pressure to reinvent their service potential and surpass customer expectations or perish. Therefore, the ways and means adopted to reach, acquire, develop, retain, and inspire (known as the customer life cycle) customers by these industries will generally be similar and insights can be cross-leveraged, albeit with some industry specific modifications. Considering industry leaders in retail, entertainment, and hotel and capturing their ways of maintaining customer life cycle reiterates the importance of:

- Gauging customer behavior
- Understanding customer needs
- Leveraging analytics

Exhibit 7

Insights from Other Service Industries - Retail, Entertainment and Hotel

Company	Tools Utilized	Area of Study	Strategy Implemented	Results
Amazon	Comprehensive collaborative filtering engine	Study items previously researched, purchased, reviewed and rated, shopping cart/wish list	Suggest products which other customers had purchased while buying the same items	35% of Amazon's product sales come from product recommendations
	Anticipatory shipping model	Predict purchase of next likely products, time of next purchase and likely delivery address	Send products to local distribution hub; shipping ready once ordered	Patented approach, expected to decrease delivery time and expenses
Nordstrom	Social media analytics	Understanding public sentiment towards their brand	Envisage global online sentiment, gauge social media performance	Rated consumers' favorite fashion retailer consecutively for three years in 2015
	Behavioral analytics	Observe customer behavior by tracking the number of people entering a store, sections surveyed by store visitors and duration in store	Decide customer specific product promotions, timing of offer and the channel	In-house "inferred scoring" system increased email-to-dollar spent conversion by 25%
	Text analytics and sentiment analysis	Monitor customer reviews, feedback, and opinions; highlight pain points	Predict incidence of repeat customers	Achieved overall accuracy of 76% while predicting repeat customers
Netflix	Recommendation engine	Analyze rich collection of behavioral data using complex algorithm	Promote the right new content to the right subscribers	75% of programs watched on Netflix come from their recommendation engine

Netflix	▪ Attribute analysis	▪ Identified ~70,000 attributes of movies and TV shows to aid investment decisions in shows	▪ Predict if customers would like the shows/series	▪ Gained >3 million customers worldwide as a result of House of Cards alone
Walt Disney	▪ Data mining, predictive analytics	▪ Gauge type of vacation packages appealing to different guest types, understand customer buying behavior in terms of preferred time windows of visit, price points of packages sought and other trends	▪ Personalize offers	▪ My Magic+[1] helped accommodate 3000 additional daily visitors
	▪ Forecasting	▪ Based on past data, forecast park attendance, guest arrivals at hotel, and attraction wait times	▪ Set park hours, perform other strategic planning measures like allocation and utilization of resources	▪ Improved accuracy in managing labor resources at its parks by 20%
InterContinental Hotels Group	▪ Multi-channel digital analytics	▪ Gain insights about customers' needs and preferences	▪ Personalize offers	▪ Boasts more than 92 million members, the world's largest hotel loyalty program as of 31 December, 2015; occupancy in 2015 was 69.7%, an increase of 0.8 pp from 2014
	▪ Analytics to assess marketing (campaigns, Priority Club Rewards) effectiveness and optimize marketing spend	▪ Analyze reservation and transactional data from hotels to understand factors affecting competitiveness. ▪ Assess advertising and marketing campaigns' effectiveness	▪ Optimize and rationalize marketing spend	▪ 4.4 pp growth in profit margin in 2015 over 2014 – the highest in the last five years
Marriott	▪ Customer analytics	▪ Study people, with millennial mind set, using data collected from Marriott Rewards program, website, and customer interactions with contact centers etc.	▪ Create personalized experience for customers based on their loyalty points, preferences etc.	▪ In 2016, American Customer Satisfaction Index rated Marriott as the best hotel brand in terms of customer satisfaction

Source: WNS DecisionPoint™ Analysis, Annual Reports, Capital IQ, Statist

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1. MyMagic+ is a combination of RFID-enabled wristbands and web portal to help visitors get through Disney theme parks
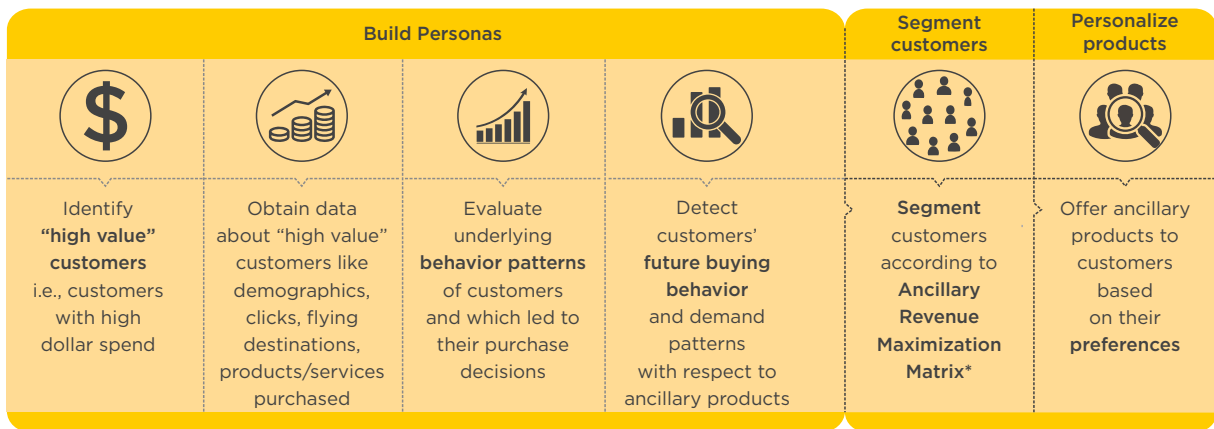
In the case of airlines, they can collect an initial, basic level of user data about customers booking through their websites. For example, which products and services did Martha, a new hypothetical flyer, consider while booking a return ticket from Chicago to Detroit and what did she end up purchasing? What was the price difference between products and services considered and bought, and were any offers leveraged in the process? Aided with information about flying destinations, frequency of travel, dollars spent on booking tickets and ancillary products, preferred hotels and car agencies, airlines should evaluate the underlying behavior and spend patterns of their high[2] valued customers that lead to purchase decisions. Airlines can study Martha's propensity to leverage offers and tendency to shop in relation to the kind of travel she has undertaken. Once there is an understanding of current behavior and spend patterns, airlines should try to figure out travelers' likely future buying behavior and forecast demand for ancillary products and services. Equipped with future travel patterns of customer personas, airlines can create personalized, 'made-just-for-me' travel experiences (Exhibit 8).

Exhibit 8

Knowing the Customer

Build Personas				Segment customers	Personalize products
Identify **"high value" customers** i.e., customers with high dollar spend	Obtain data about "high value" customers like demographics, clicks, flying destinations, products/services purchased	Evaluate underlying **behavior patterns** of customers and which led to their purchase decisions	Detect customers' **future buying behavior** and demand patterns with respect to ancillary products	**Segment** customers according to **Ancillary Revenue Maximization Matrix***	Offer ancillary products to customers based on their **preferences**

Source: WNS DecisionPoint™ Analysis

* Discussed on Page 21

This would also help airlines create and share offers with customers during their probable time of travel. For example, another traveler, Michael traveled economy class to places like Kauai, Sedona for the past two years. Without analyzing his travel, offering him a deal consisting of transfer by Porsche Cayenne while he is booking flights for his next visit is bound to be a failure. While he is booking flights for his next visit is bound to be a failure. Instead, looking at his spend patterns on flight tickets and ancillary services, flying destinations and time of travel, it can be inferred that he probably likes hiking travel tours in the U.S. but on a lower budget and might continue doing the same this year as well. Therefore, offering him a deal at a time when he usually plans his vacation with return air tickets to Yosemite National Park, a hatchback car transfer and a four-day stay in a budget hotel near the park would be more appealing to him. According to a report by Amadeus[vii], it is more likely that every one in four travelers would respond to customized messages and one in five would respond to promotional offers pertaining to their location.

2. Frequently flying customers always flying business or first class/customers frequently purchasing ancillary products/services

DETERMINING FUTURE OFFERINGS FOR CUSTOMERS

Airlines can extrapolate behavior and spend patterns of "high valued customers" from their interactions through airlines' website by looking at their shopping, order history and customer profiles as depicted in Exhibit 9, 10 and 11. Utilizing these data trends relating to customers'

spend on ancillary products, airlines can:

- segment customers
- personalize offers to customers booking tickets through the airline's website
- mail personalized offers to

customers closer to their probable time of travel

- Make custom offers based on "unidentified" customers' search requests through travel agents when they act as Offer Responsible Airline (ORA) or Participating Offer Airline (POA).

Exhibit 9

Understanding Customer Behavior through Customer-Airline Interaction Obtained from Shopping Profiles

Shopping	Customer Information	Present Behavior and Spend Habit Inferred	Future Behavior Predicted	Future Offerings

In-flight Shopping	- Products/services considered and bought
	- Price difference between products/ services considered and those finally bought
	- Offers leveraged
		- Buying habits
		  › Products/services clicked but not bought
		  › Who is buying what, when (business/leisure/international trips or trips to particular places) and at what price?
		- Propensity to leverage offers
			- Need and preference for certain products/ services in the future keeping in mind the current spend trend	- Appropriate products based on predictive models

Baggage Allowance & Charges	- Check-in and carry-on baggage mix
	- Charges paid for check-in and carry-on baggage
	- Offers leveraged
		- Willingness to pay for checked baggage based on
		  › Distance covered
		  › Price of tickets paid
		  › Number of travelers
		  › Propensity to leverage offers
			- Preference for certain baggage mix based on past trip details	- Desired baggage mix at a price customer is willing to pay for a certain type of trip

Flight Fare	- Ancillary services/ products considered
	- Ancillary services/products bought
	- Price difference between considered and bought services
	- Offers leveraged
		- Correlation between choice of ancillary products/services and
		  › Distance travelled
		  › Price of products/services
		  › Type of travel - company/self-sponsored
		  › Propensity to leverage offers
			- Preference for ancillary services/products of certain price based on the kind of trip	- Services desired by the customer depending upon trip type and price range

Shopping	Customer Information	Present Behavior and Spend Habit Inferred	Future Behavior Predicted	Future Offerings
Availability of Seats	▪ Seats chosen - premium/non-premium/window/middle/aisle ▪ Offers leveraged		▪ Preference for certain seats and willingness to pay	▪ Offer seats based on what a customer is actually willing to pay and kind of trip undertaken

Source: WNS DecisionPoint™ Analysis

Exhibit 10

Understanding Customer Behavior from Customer-Airline Interaction Obtained from Order History Profile

Order History	Customer Information	Present Behavior and Spend Habit Inferred	Future Behavior Predicted	Future Offerings
Booking & Servicing	▪ Frequency of change in orders ▪ Cancellations/rescheduling made ▪ Offers availed of during rescheduling	▪ Patterns of purchase, cancellation, and repurchase ▪ Preferred price points ▪ Times usually traveled and usual purpose of travel ▪ Propensity to leverage offers	▪ Likely frequency, time and type of travel (business, leisure, international) ▪ Likelihood of responding to future promotional offers ▪ Likelihood of cancellations and repurchase ▪ Preferred price points	▪ Offer bundled services and products as per past behavior when a customer tries to book tickets ▪ Initiate combo deal offers during probable time of travel
Payment and Ticketing	▪ Fare of flight seats booked, distance travelled, seats/products bought, cancelled and repurchased ▪ ·Cancellations/rescheduling made ▪ Offers leveraged during rescheduling			

Source: WNS DecisionPoint™ Analysis

Exhibit 11

Understanding Customer Behavior through Customer-Airline Interaction Data Obtained from Customer Profile

Customer Profile	Customer Information	Present Behavior and Spend Inferred	Future Behavior Predicted	Future Offerings
Demographics and Behavioral Attributes	• Professional - industry, years of experience, organization hierarchy	• Need for travel • Kind of travel (business/ leisure/international/ domestic/back on the same day) • Purchaser of travel (company/self-sponsored) • Dollar value spent on travel and ancillary products/services	• Future need and frequency of travel	• Products and services considering professional, personal and behavioral data
	• Personal-parents, spouse, children and their age/ occupation/place of residence	• Frequency of travel with family members • Destinations of travel with family • Dollar value of travel with family	• Future need, frequency and monetary value of travel	
	• Behavioral - Vocality about airline services/products on social platforms	• High/medium/low presence in social media • Number of friends/followers • Frequency and content of social media posts	• Likelihood of being vocal about good/ bad service • Degree of brand advocacy that will be displayed	

Source: WNS DecisionPoint™ Analysis

Prior to NDC, ORAs and POAs had admittance to basic details about actual bookings. With the adoption of NDC, airlines could invest in systems focusing not only on tracking bookings but studying search and buying behavior as well. To be in control of their sales process, airlines need to act like retailers and draw insights from the "sales funnel" and conversion ratio. The volume of overall search funnel is likely to be huge compared to booking volume since all ancillary products/flights options investigated are not bought. By emulating the approach of retailers, airlines could convert these "leads" into "sales". WNS DecisionPoint™ presents **Comprehend Your Customer Framework** (CYC Framework) by which airlines can generate offers by linking data fields from their order history, shopping and customer profiles to create a single view of customer (Exhibit 12).

Exhibit 12

Association of Order History, Shopping and Customer Profiles Data Fields to Create a Single View of Customer – CYC Framework

Leveraging the order history profile, a database of following customer data and unique interactions can be created:	Airlines can query the "order history" database, consider annual data for the past few years (3 – 5 years) to eliminate behavioral skewness, if any and drive:	**1**
▪ Bookings rescheduled ▪ Bookings cancelled ▪ Total final bookings ▪ Time and date of travel ▪ Origin and destination ▪ Fare ▪ Number/age/gender of travelers ▪ Offers leveraged ▪ Ancillary products booked ▪ Ancillary products cancelled ▪ Ancillary products exchanged etc.	**Segmentation (Most Valued/Valued/ Potentially Valuable/Not Valuable[3]) based on:** ▪ Frequency of flying ▪ Spend per booking ▪ Spend on ancillary products	**Segmentation (Most Valued/Valued/Potentially Valuable/Not Valuable) based on:** ▪ Propensity to leverage offers ▪ Propensity to cancel/exchange ancillary products ▪ Most favored ancillary products ▪ Most ancillary products cancelled/ exchanged ▪ Time period (months) of maximum purchase of most favored ancillary products ▪ Time period (months) of maximum bookings ▪ Origin and destination of maximum bookings ▪ Average final bookings/year

2 Based on annual trends in "shopping" database for past few years, airlines could:	For customers belonging to Most Valued or Valued or Potentially Valuable segments, airlines should look at the "shopping" database containing the following data points and attempt to refine knowledge on customers' preference
Refine customer behavior based on: ▪ Willingness to pay for ancillary products (bought) ▪ Correlation between willingness to pay for ancillary products and duration of flight, age, gender, number of travelers ▪ Top 5 ancillary products with highest views (based on maximum time spent per page or highest related page visit) but not bought ▪ Price points of the top 5 ancillary products viewed but not bought	▪ Time spent per page but ancillary product viewed/considered not bought ▪ Number of related pages visited but ancillary products viewed/considered but not bought ▪ Price points of ancillary products bought ▪ Selected offers etc.

Source: WNS DecisionPoint™ Analysis

Based on present behavior and spend habit (obtained from 1 and 2), likely future behavior of customers can be predicted so that:

▪ Customers can be segmented on the basis of their future profitability

▪ Bundled products/services, based on their past and predicted behavior, can be offered when they try to book tickets

▪ Customized/personalized offers can be initiated during their probable time of travel

▪ Insights can be extrapolated and offers accordingly created for "unidentifiable" customers booking through travel agents

The algorithms airline use to frame offers (ancillary products/services it wishes to offer, and at what price), is based on the airline's commercial appetite and the availability of supporting data analytics infrastructure in terms of hardware, software, and data scientists.

3. Discussed in detail on page 21

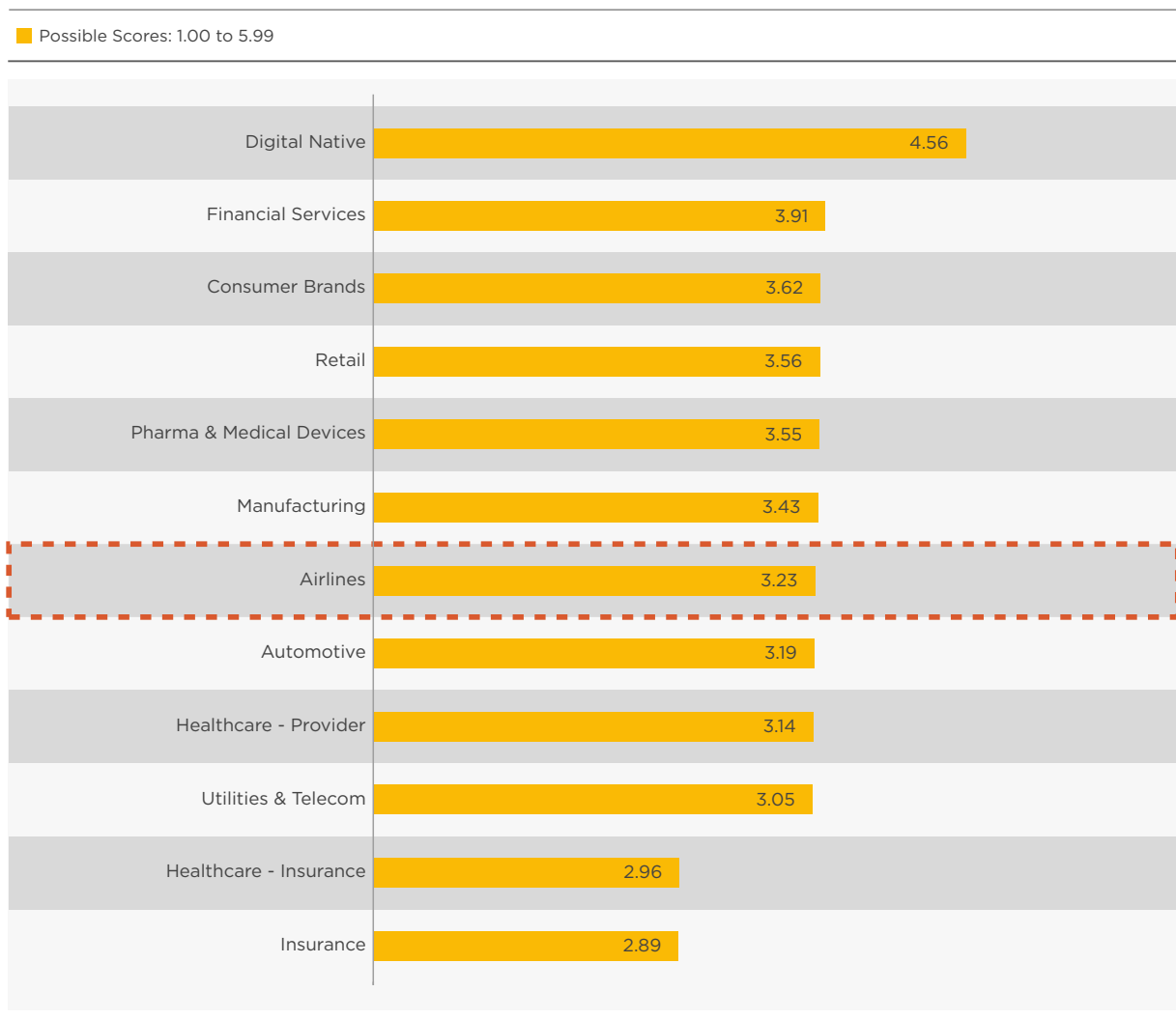# USAGE OF ANALYTICS - PREDICTING TRAVELERS' FUTURE BUYING BEHAVIOR

A number of airlines gather data internally but struggle to transform unstructured data like chat logs, call center transcripts, and social network feeds into insights.

According to a report by the International Institute for Analytics[viii] in 2016, airlines were seventh in terms of analytics maturity behind the likes of

Amazon, Google and Netflix, together called "Digital Native" (Exhibit 13).

Exhibit 13

Analytics Maturity Scores across 12 Industries

■ Possible Scores: 1.00 to 5.99

Industry	Score
Digital Native	4.56
Financial Services	3.91
Consumer Brands	3.62
Retail	3.56
Pharma & Medical Devices	3.55
Manufacturing	3.43
Airlines	3.23
Automotive	3.19
Healthcare - Provider	3.14
Utilities & Telecom	3.05
Healthcare - Insurance	2.96
Insurance	2.89

Source: International Institute for Analytics

Albeit difficult, leveraging data sets like transactional data and customer feedback effectively is possible and can help airlines discover their customers' future behavior. To succeed in that endeavor, airlines should invest in sophisticated analytics, as depicted in Exhibit 14.

Speech analytics deployed on recorded calls will help identify, classify and arrange spoken words and phrases during calls into themes automatically and reveal upcoming trends, issues and opportunity areas. Consequently, airlines can quickly process terabytes of data, emanating from tens of thousands of calls, to determine areas of concern and plan corrective action. For example, Southwest Airlines leverages speech analytics on recorded communication between customers and customer care agents to extract information about customers' experiences and their needs.

To understand customers' current behavior even more accurately, airlines should try extracting customer perceptions and sentiments from social media commentary to gauge what customers like or dislike about the brand, services, and overall experience.

Social media analytics tools should be deployed to monitor an airline's reputation in real-time, seeing if users are posting positive or negative messages about their experiences. The approach would determine not only customers' sentiments but also seek insights around opinions, emotions, and behavior and evaluate the success of marketing campaigns. Grouping sentiments, opinions and behavior would provide an outlook about the overall brand sentiment. Over time, it would also give a sense of an airline's performance, the market and the competition and help the carrier build brand equity.

Exhibit 14

Analytics to Determine Customers' Behavior in Future

Application Areas	Key Objectives	Data Sources	Analytics Techniques
Ticket & Ancillary Sales	▪ Cross sell additional ancillary offerings based on customer history and profile ▪ Display alternative offers based on preferred destinations and routes	Flight booking data, Customer profile, Payment data, Loyalty program usage, Ancillary spend	Predictive analytics
Channel Management	▪ Figure out preferred channels for branding and promotional communication ▪ Improve channel RoI by analyzing channel cost, transaction volume, average fare, seasonality etc.	Flight booking data, CRM data	Web analytics, Visual analytics, Speech analytics
Targeted Marketing	▪ Use internal and external sources of client data for efficient marketing, sending the right promotion and marketing communication to the right customer set using the right channel	Customer profile (both internal and external sources), CRM data	Campaign management analytics, Web analytics
Identifying High Value Passengers	▪ Segment demographic data to narrow down on potential high value segments ▪ Analyze travel patterns and spending behavior to gauge future propensity of generating high margin transaction	Customer profile (both internal and external sources), Ancillary spend, Flight booking data, Loyalty program	Predictive analytics
Social Listening	▪ Maintain a positive online/social media reputation by constant monitoring of positive and negative mentions about the brand ▪ Collect data on customer expectations and customer grievances for more effective and relevant customer engagement strategies	Social media sites (profiles, comments, likes, shares)	Social media analytics

Source: WNS DecisionPoint™ Analysis

Social media platform is more than just a mere marketing, customer service or public relations tool. While many airlines have begun utilizing social media to improve customer engagement rates, the ones who succeed in the future will need to identify and offer what travelers' want and need without even prompting them. **Predictive analytics** and complex forecasting can enable airlines to actually know a customer's future behavior – right down to an individual's need, preferences and buying habits. Plus, it will reduce airlines' overall operational and marketing costs to serve a customer by interpreting their needs accurately and offering products suited to their needs. If Martha agrees to share personal details and her social media profile, airlines can know that she is based

out of Chicago, went to Tier II B-school, heads sales in Midwestern United States for a leading global beverage company and has a daughter about six to seven years old. To be responsible for heading sales in a particular region, Martha must have spent close of 15 to 20 years in the industry and is likely to be a part of the same industry in the future as well. So, the likelihood of her being a regular traveler would remain high. Analytics can help give Martha an experience perfectly suited to her needs, and in turn, help airlines be competitive, profitable, and preferred.

To estimate customers' future need for ancillary products/flight options, airlines need to act like retailers and monitor customers' movement on their websites. Since

all options explored by customers are not bought, such offerings have the potential to be up-sold or cross-sold in future. By emulating the approach of retailers and leveraging **visual analytics** to track clicks, airlines could convert these "leads" into "sales". They should also use visitor recording to track the journey of a user through scroll, mouse movement, click and keypress on a website. Visual analytics is an excellent method to gauge options surveyed by a customer before deciding on a final product/service. Diagnostic analytics can be deployed to evaluate which promotions, campaigns and offers worked in the past and which did not. This form of analytics can also segment customers on the basis of spend and revenue generated.

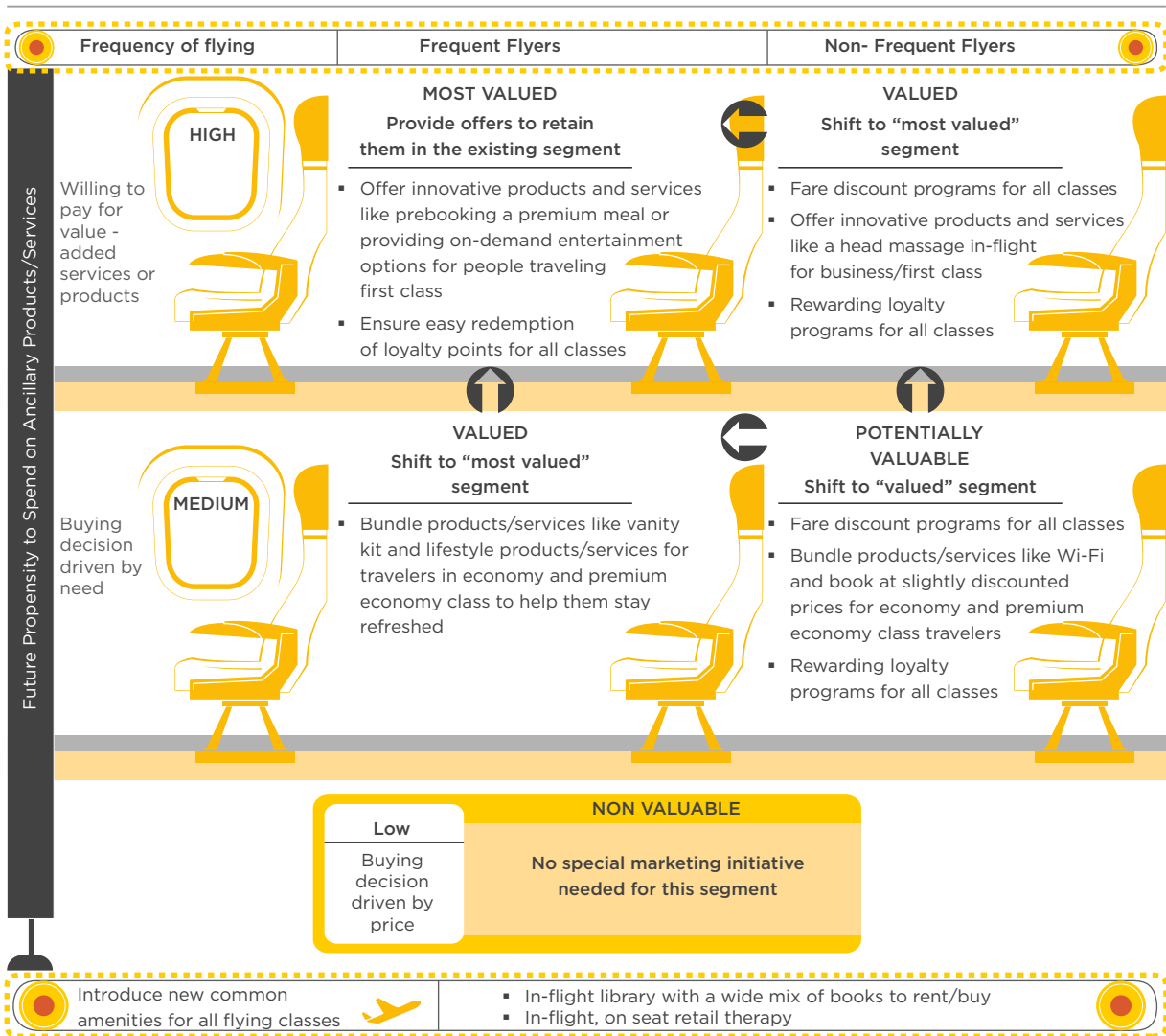# SEGMENTING TRAVELERS - OFFERING "NEED BASED" ANCILLARY PRODUCTS/ SERVICES

Based on customers' likely future behavior - their propensity to spend on ancillary products/ services and the frequency of travel, airlines can segment customers into four distinct classes as depicted in Exhibit 15. Corresponding to each class or category, the airlines could offer ancillary products/services at the flight booking stage, at the airport or during the flight or after the flight, tailored to customers' needs. The products/services offered should also vary by flying class and involve personalization to suit a traveler's behavior and need.

Exhibit 15

Ancillary Revenue Maximization Matrix

Frequency of flying	Frequent Flyers	Non- Frequent Flyers
HIGH — Willing to pay for value - added services or products	**MOST VALUED** Provide offers to retain them in the existing segment ▪ Offer innovative products and services like prebooking a premium meal or providing on-demand entertainment options for people traveling first class ▪ Ensure easy redemption of loyalty points for all classes	**VALUED** Shift to "most valued" segment ▪ Fare discount programs for all classes ▪ Offer innovative products and services like a head massage in-flight for business/first class ▪ Rewarding loyalty programs for all classes
MEDIUM — Buying decision driven by need	**VALUED** Shift to "most valued" segment ▪ Bundle products/services like vanity kit and lifestyle products/services for travelers in economy and premium economy class to help them stay refreshed	**POTENTIALLY VALUABLE** Shift to "valued" segment ▪ Fare discount programs for all classes ▪ Bundle products/services like Wi-Fi and book at slightly discounted prices for economy and premium economy class travelers ▪ Rewarding loyalty programs for all classes
Low — Buying decision driven by price	**NON VALUABLE** No special marketing initiative needed for this segment	

(Y-axis: Future Propensity to Spend on Ancillary Products/Services)

Introduce new common amenities for all flying classes
▪ In-flight library with a wide mix of books to rent/buy
▪ In-flight, on seat retail therapy

Source: WNS DecisionPoint™ Analysis

Customers with a high potential future spend on ancillary products and services and a frequent travel schedule form the **"most valued"** segment. The idea is to retain these customers in this segment by continuously providing them with innovative products apart from regular ones like power banks, mobile, iPad chargers in flight.

The second rung consists of **"valued"** travelers with medium propensity to spend on ancillary products/services and frequent travel or high propensity to spend on ancillary products/services and infrequent travel. The former has a tendency to spend on need based products. By persistently providing different levels of "need based only" services/products to travelers in this segment, an airline will be able to help flyers gradually go up the hierarchical order of needs, making it more likely for the travelers to purchase a higher value need-based service/product in the

future. For the latter, airlines should try to brand themselves as the preferred flying medium by offering fare discounts and various loyalty programs.

The third rung of customers, the **"potentially valuable"** segment, has travelers with medium propensity to spend on ancillary products and services and infrequent travel. The idea is to facilitate their evolution to the "valued" group by offering them "need based" discounted product bundles and slowly moving them up on their hierarchy of needs so that they purchase a higher need based product/service in the future or by offering them discounted fares and loyalty programs so that travel with the airline becomes a need.
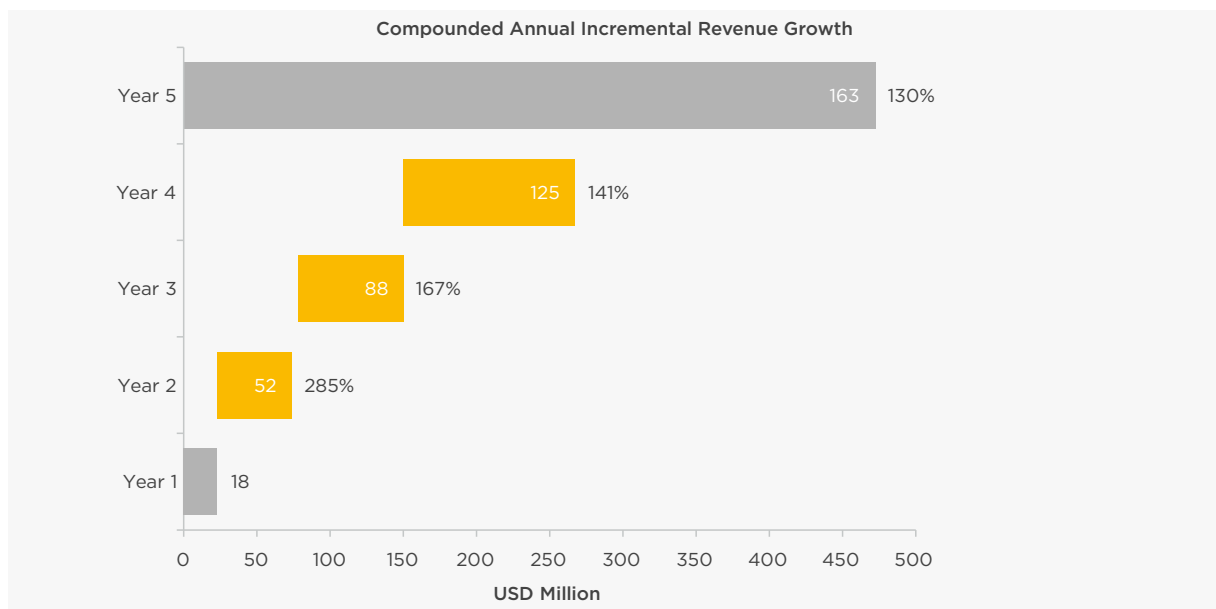
Over and above the segment specific opportunities, airlines could provide an entirely new flying experience to customers by offering in-flight e-libraries with a

well-thought assortment of books and an in-flight shopping experience by partnering with retail giants like Amazon or country specific online souvenir shops. This can be done by making available iPads/tablets in-flight loaded with entertainment packages free of charge, where passengers can have access to an e-library at a nominal charge and online retail stores.

Airlines must outgrow their traditional role of being a transportation provider and personalize initiatives, like a retailer, to engage customers at various stages. According to Sabre, personalizing ancillary products/ services could increase incremental ancillary revenue by as much as 22%[v]. This could translate into a five-year revenue uplift of USD 163 million for a mid-size carrier(Exhibit 16).

Exhibit 16

Airline Ancillary Revenue Uplift due to Personalization

Compounded Annual Incremental Revenue Growth

Year	USD Million	Growth
Year 5	163	130%
Year 4	125	141%
Year 3	88	167%
Year 2	52	285%
Year 1	18	

USD Million

Source: Sabre

UTILIZE THE INSIGHTS – REDESIGN LOYALTY, CAMPAIGN AND PROMOTIONS PROGRAMS

The vast customer data obtained can help not only capitalize on the airline ancillary revenue market opportunity but also be used to hone other practices within the marketing domain (Exhibit 17). First and foremost, airlines' loyalty programs can undergo a sea change from their current form of being complex and unrewarding for customers. Such a dichotomy exists because airlines follow a "one size fits all" approach which ends up defeating the purpose of loyalty programs.

The plethora of customer data airlines are exposed to, if mined thoroughly using an optimum combination of social media analytics, visual analytics and speech analytics, could provide valuable insights about customers' behavior and needs. Based on the insights from this data and calculations regarding the future profitability of customers, reward allocation should be done for different customer segments. With loyalty programs becoming actually rewarding and targeted towards specific customer sets, airlines will be successful in retaining their existing customers.

The Return on Investment (RoI) can be gauged by measuring the extent of repeat business and the rise in social advocacy by travelers.
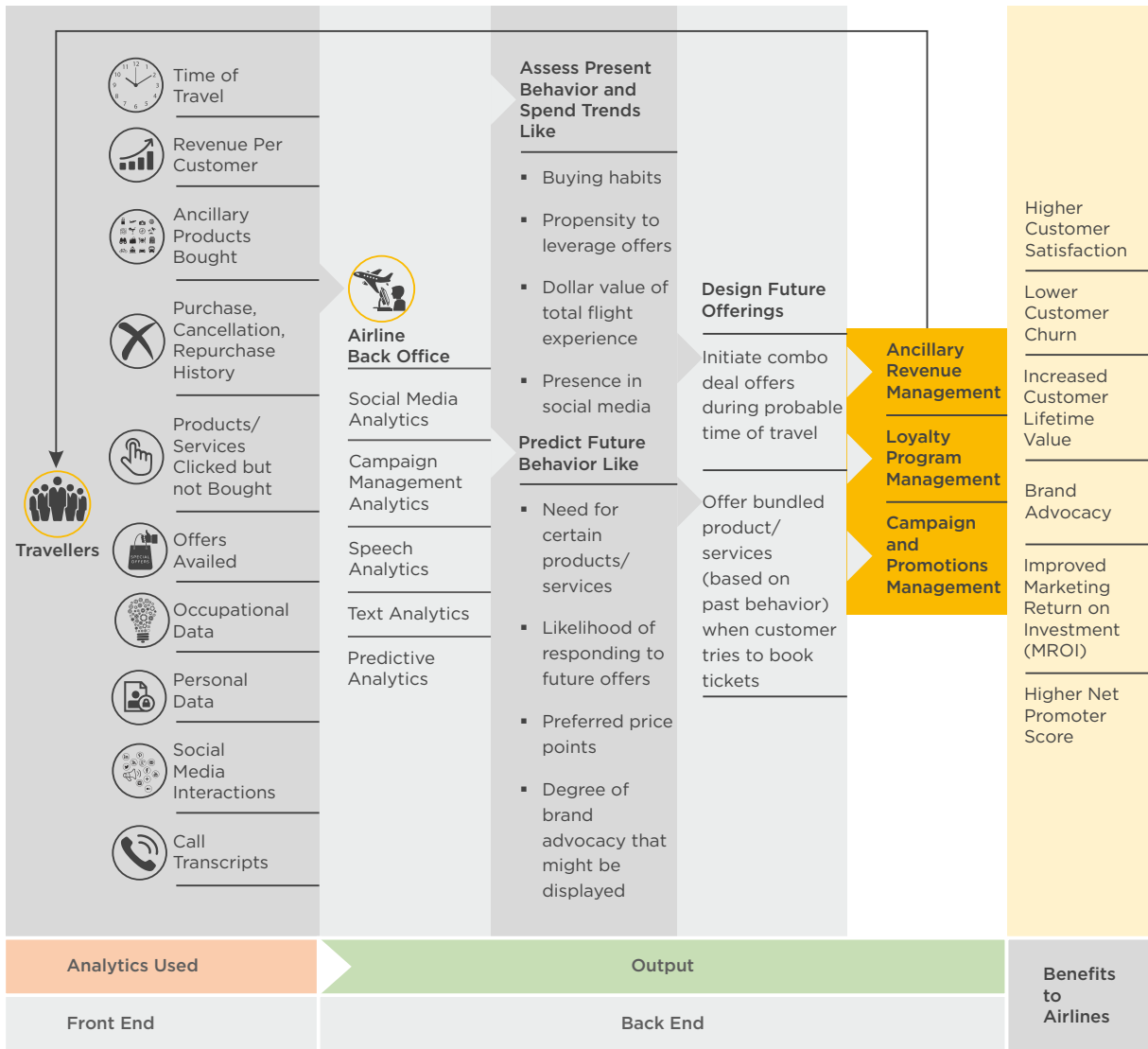
Insights from customer data could also be used to design campaign and promotion strategies that create personalized experiences by taking into consideration the value drivers of each segment. Michael, for example, values hiking and is a price conscious traveler. Offering him deals conforming to his persona would have a higher chance of getting accepted as compared to a random promotional offer. The RoI of campaigns and promotions can be gauged by campaign management analytics which would read and analyze customers' responses and count sales linked to marketing campaigns. This would also establish data-validated best practices which would act as the input for future campaign design.

Exhibit 17

Redesigning Airline Practices by Combining Newer Insights about Customers

Travellers

- Time of Travel
- Revenue Per Customer
- Ancillary Products Bought
- Purchase, Cancellation, Repurchase History
- Products/ Services Clicked but not Bought
- Offers Availed
- Occupational Data
- Personal Data
- Social Media Interactions
- Call Transcripts

Airline Back Office

Social Media Analytics

Campaign Management Analytics

Speech Analytics

Text Analytics

Predictive Analytics

Assess Present Behavior and Spend Trends Like

- Buying habits
- Propensity to leverage offers
- Dollar value of total flight experience
- Presence in social media

Predict Future Behavior Like

- Need for certain products/ services
- Likelihood of responding to future offers
- Preferred price points
- Degree of brand advocacy that might be displayed

Design Future Offerings

Initiate combo deal offers during probable time of travel

Offer bundled product/ services (based on past behavior) when customer tries to book tickets

Ancillary Revenue Management

Loyalty Program Management

Campaign and Promotions Management

Higher Customer Satisfaction

Lower Customer Churn

Increased Customer Lifetime Value

Brand Advocacy

Improved Marketing Return on Investment (MROI)

Higher Net Promoter Score

Analytics Used	Output	Benefits to Airlines
Front End	Back End	

Source: WNS DecisionPoint™ Analysis

THE WAY FORWARD

WNS DecisionPoint™ identified ancillary revenue growth opportunities for 63 airlines across Europe and Russia, The Americas, Middle East and Africa, and Asia/South Pacific. Ancillary revenue figures from 2014 exhibit underutilization of airlines' ability to maximize ancillary revenues.

To help airlines promote and sell ancillary products and services by addressing shortcomings of the industry's present distribution system, International Air Transport Association (IATA) has introduced New Distribution Capability (NDC) program . This will enable airlines to showcase their ancillary options and services better, thereby empowering travelers to be able to shop and compare the value of these propositions across airlines.

However, with airlines ranking low[viii] in terms of analytics maturity, the road ahead seems arduous. First, there needs to be a marked shift in the way airlines derive and handle insights from data. To maximize USD 130 billion (by 2020) ancillary product/service market, airlines need to monitor and draw insights from their "sales funnel" and conversion ratio. Secondly, to showcase the right ancillary services to the right set of travelers at the right time, airlines have to be armed with personalized ancillary products.

WNS DecisionPoint™ recommends development of a detailed roadmap to recognize different behavior and spend extrapolations of customers from varied customer footprints leading to refined views about customers – **the CYC Framework;** precise ways of segmenting customers – **the Ancillary Revenue Maximization Matrix** and the selection of analytics to determine customers' future behavior.

Above all, these rich customer insights can also help airlines design well-rounded loyalty program strategies and targeted promotional campaigns thus taking customer centricity to a wholly different level.

About DecisionPoint

Making key decisions that improve business performance requires more than simple insights. It takes deep data discovery and a keen problem solving approach to think beyond the obvious. As a business leader, you ought to have access to information most relevant to you that helps you anticipate potential business headwinds and craft strategies which can turn challenges into opportunities finally leading to favorable business outcomes.
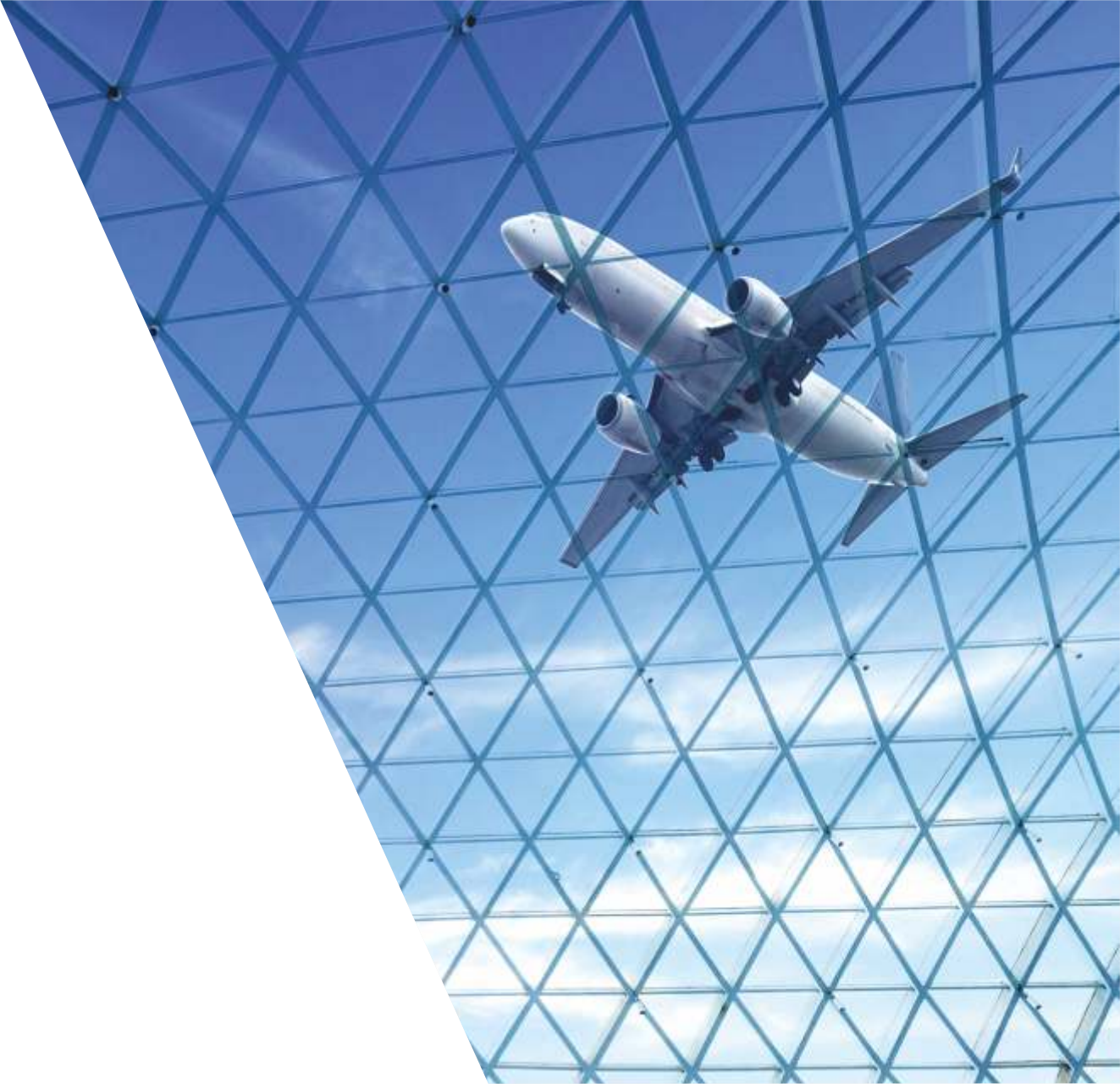
WNS DecisionPoint™, a one-of-its kind thought leadership platform tracks industry segments served by WNS and presents thought-provoking original perspectives based on rigorous data analysis and custom research studies. Coupling empirical data analysis with practical ideas around the application of analytics, disruptive technologies, next-gen customer experience, process transformation and business model innovation, WNS aims to arm you with decision support frameworks based on 'points of fact.' Drawing on our experience from working with 200+ clients around the world in key industry verticals, and knowledge collaboration with carefully selected partners including Knowledge@Wharton, each research asset comes up with actionable insights with the goal of bringing the future forward.

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