

ARTICLE

# FLIGHTS TO FRIDGES: LEVERAGING ANALYTICS TO INCREASE AIRLINE ANCILLARY REVENUE

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When travelers return from vacations, they are often reminded of something other than collecting their baggage and booking a taxi. That something is an empty fridge. However, a European airline has its customers covered. It allows passengers arriving at The Hague airport to pick up a pre-booked welcome home meal box.<sup>1</sup> The airline is conducting this experiment in partnership with a Dutch supermarket chain. This is one example of the numerous ways in which airlines are diversifying their revenue sources and creating newer opportunities to increase ancillary revenues.

Ancillary revenue is becoming increasingly important for airline profitability. Hence, airlines are betting heavily on predictive analytics, digital, Artificial Intelligence (AI), Machine Learning (ML), Natural Language Processing (NLP) and Internet of Things (IoT) to help them win the ancillary game. For instance, a European airline plans to invest Euro 200 Million in digital and data development by 2020.<sup>2</sup> A leading U.S. airline's investment in big data technology now enables the real-time analysis of more than 150 variables about customers to predict individual future actions.<sup>3</sup>

Let's take a look at some of the key areas where analytics is enabling airlines to increase ancillary revenues.

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<sup>1</sup> <https://www.ah.nl/appiefly>

<sup>2</sup> <https://www.tnooz.com/article/air-france-klm-invests-big-data/>

<sup>3</sup> <https://fortune.com/2014/06/19/big-data-airline-industry/>

# TREND PREDICTION

Customer preferences continuously evolve with time and are also influenced by external factors. Many industries have been using analytics to predict future trends to determine products and services. For example, beverage companies often use predictive tools to determine which flavors of chips might scale up in the future. Airlines can similarly leverage such predictions while planning the in-flight menu, which can be based on data such as weather, sector and customer preferences.

For example, a leading U.K.-based airline started serving branded sandwiches on board based on findings that customers would be willing to pay for food from a known brand.<sup>4</sup>

Another example is the in-flight sale of duty-free products which has been on the decline. An obvious response for airlines is to discontinue the sales when it stops being viable. However, analytics is helping airlines predict shopping trends and create alternatives such as e-commerce platforms for duty-free products, which the customers can access using the in-flight wi-fi service

# BEHAVIORAL PROFILING

Behavioral profiling can help airlines decide on appropriate bundling of ancillary products. A family traveling with children for a holiday is more likely to buy excess baggage than a solo traveler. A mother with a toddler, flying coach, is more likely to pay for extra legroom and priority baggage. Similarly, a business traveler may choose to pay for in-flight wi-fi services.

Behavioral profiling also enables dynamic pricing of ancillaries. A traveler who has historically always booked based on the lowest price will have a lower propensity to pay more for comforts, as compared to another customer who has opted for business class on many occasions.

# PERSONALIZED MARKETING

Personalized marketing<sup>5</sup> has made deep inroads in industries such as retail. For airlines, until not too long ago, offerings centered mostly on flight seats and a few add-ons primarily because the distribution channel relied on Global Distribution Systems (GDSs) and travel agents. Today, however, airlines are adding ancillary revenue streams every year and customers are increasingly booking directly using online channels by making comparisons in real time.

# PRODUCT DESIGN

Analytics can help airlines design innovative ancillary products and services in areas where untapped demand exists. For example, an Asian airline offers customers an 'empty seat' option so that they can purchase one or two unoccupied seats next to theirs on the day of travel.<sup>6</sup> Sleeper sofa<sup>7</sup> is another option wherein a row of coach seats can be converted into a single, horizontal sleeping space using detachable headrests and mattresses. Customers can indicate their interest in this ancillary at the time of purchase and are given an option to book on the day of travel based on the seat inventory. In all these examples, analytics is helping airlines innovate ancillary products across products and services.

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<sup>4</sup> <https://www.reuters.com/article/us-airlines-food-idUSKCN1201ZL>

<sup>5</sup> <https://www.wns.com/insights/case-studies/casestudydetail/481/co-creation-enables-personalized-marketing-promotions-using-analytics>

<sup>6</sup> <https://www.airlinetrends.com/category/ancillary-revenues/>

<sup>7</sup> <https://www.airlinetrends.com/2016/04/13/south-african-airways-launch-airline-of-economy-sofa-bed/>



# UNTAPPED POTENTIAL

According to one study,<sup>8</sup> the ancillary share of revenue for leading airlines was found to be greater than 27 percent for market leaders and merely 5 percent for laggards. Clearly, there is untapped potential for airlines to leverage. While airlines collect vast amount of data, they face significant challenges in bringing the data together in a way that will drive ancillary revenues to the next level. As airlines gradually evolve the ancillary revenue streams, there are typical gaps that I have observed which can be addressed by analytics in combination with technologies such as AI, ML and IoT.

Here are some key challenges and gaps in leveraging the full potential of ancillary revenue.

## 1. Lack of Systems to Integrate Data

Estimates suggest<sup>9</sup> that the annual data generation by modern aircraft will touch 98 billion gigabytes by 2026. However, airlines lack the systems to aggregate all the data required to predict customer behavior. Information across data streams such as GDSs, Customer Relationship Management (CRM) and booking portals do not always synchronize with each other. Without the right data infrastructure, airlines cannot convert all the data they access into revenues.

## 2. Inability to Make Predictions Across Customer Journey

Without the ability to aggregate varied data sources, airlines cannot generate the insights required to make the right ancillary recommendations to customers. Even where recommendations are made, they tend to be unidimensional and simplistic. For example,

in a usual scenario, a passenger booking a ticket is offered ancillaries such as seats with extra legroom and meals. However, what if the customer could be offered a coupon to buy something at a store after completing the security check? Airlines are missing such opportunities to increase ancillary revenue because of data not coming together in ways that factor in interaction effects and customer journey.

## 3. Lack of Differentiated Ancillary Selling Strategy

I have also observed gaps in the merchandising strategies being used by airlines at present. Ancillary bundled offerings do not offer adequate flexibility to customers. The emphasis is still on pull-driven sales when the customer enquires at the call center or counter. Despite personalization being a stated priority for airlines, ancillary sales are still tilted towards a one-size-fit-all approach.

Airlines are also personalizing recommendations<sup>10</sup> based on customers' past ancillary purchases. Recommendations based on the itinerary are better predictors of ancillary purchase as compared to historical data and persona-based predictions. The former allows for predictions to be made even if there are low transaction volumes or if the customer is new. Personalization based on relevance to itinerary is real-time and actionable.

Without building the right capabilities to leverage the data they collect and power AI-enabled predictions, airlines will find it difficult to answer questions such as:

- Who should ancillaries be offered to?
- Which channels should be used?
- How to optimize the ancillary bundle?
- What is the right bundle pricing?

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<sup>8</sup> <https://www.diggintravel.com/2018-airline-ancillary-revenue-trends/>

<sup>9</sup> [http://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2017/jun/Aviations\\_Data\\_Science\\_Revolution\\_The\\_Connected\\_Aircraft\\_Final\\_web.pdf](http://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2017/jun/Aviations_Data_Science_Revolution_The_Connected_Aircraft_Final_web.pdf)

<sup>10</sup> <https://www.wns.com/solutions/functional-solutions/analytics/ancillary-revenue-enhancement-engine-for-airlines>

# RETAILER MODEL FOR AIRLINES

In the past few years, the business model for airlines has been evolving to the extent where it has become similar to the retail industry. In this context, analytics certainly takes centerstage and airlines will need to focus on building this capability.

A crucial success factor will be in finding service partners who not only understand the industry dynamics but have the right analytics and technology capabilities to join the dots of large volumes of data and generate insights that actually drive revenues.

Building the data infrastructure will also be a necessary precursor to leveraging emerging technologies such as AI and ML. For example, if a customer purchases a ticket two months in advance, the option of buying a particular ancillary product such as excess baggage remains open till the day of the journey.

Advanced predictive models can help airlines predict the likelihood of a passenger buying excess baggage at the time of booking itself. The airline can accordingly decide to promote its excess baggage offer to passengers with high propensity to buy and accelerate the sale of ancillary.

Analytics clearly offers airlines the opportunity to win in this new business context. However, it will be neither easy nor linear. Focusing on building analytics capability by finding the right partner and investing in the appropriate mix of technologies will be the new name of the game.





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