



IMPROVING REVENUE AT THE FLIGHT LEVEL

An Embark advisory product

Overview

Revenue Management is the practice of maximizing the revenue generated on each flight by aligning passenger demand (and willingness to pay) with the optimal mix of fare products. This article will discuss and provide examples of how to analyze and action seat inventory to increase profitability.

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“Airline seats are a perishable good - you have only one chance to sell a seat at the right price before departure...”

It is important to understand that an airline seat is “perishable” and demand is highly dynamic across time. Unlike a sofa in a furniture store that can sit on display at a fixed price until purchased, the opportunity to sell an airline seat is gone after the flight departs. Revenue Management provides airline managers the opportunity to make the most out of that perishable inventory of airline seats - by maximizing revenue through a variety of price points. Revenue Management allows an airline to make informed, data-driven decisions, rather than relying on guesswork. With typically small margins, neglecting the best practices of Revenue Management could be the difference between a route being profitable or not.

Breaking down the basics

The goal of revenue management is to maximize the revenue generated on each flight by aligning passenger demand and their willingness to pay with the appropriate fare product (i.e. price). This is done by analyzing the trade-off between load factor, or how full the flight is, and yield, the revenue per passenger. If a flight is managed ineffectively there are two potential outcomes:

Spoilage: A seat that had demand but is flown empty is considered “spoiled”. This inventory is effectively removed from the shelf at departure and the opportunity for revenue capture is lost. This occurs when a flight attempts to sell seats at a price above the customer’s ‘willingness to pay’ threshold. At a lower price (or yield), the demand would have been fulfilled driving additional revenue for the airline.

Spill: Too many seats are filled (or sold out) with low-yielding demand, thus resulting in passengers who are willing to pay a higher ticket price being turned away.

A balance between load factor and yield that mitigates both spoilage and spill, or what we like to call the “sweet spot” can be measured through revenue per available seat mile (or RASM). RASM is calculated by dividing revenue by the available seat miles (ASMs), deriving a distance and capacity-

adjusted revenue number. The goal of the Revenue Management and Pricing teams is to maximize RASM. All else being equal, a route with a higher RASM is a more profitable route.

Predicting Demand

Predicting demand first requires an airline’s understanding of customer segmentation. For each passenger segment, the forecast is broken down by demand volume and the willingness to pay. Most airlines segment their customers into three core groups:

- 1) **Business travelers** – price is mostly inelastic, they book at the last minute, and they need the most flexibility for changes.
- 2) **Visiting Friends and Relatives (VFR)** – this segment is more price sensitive and driven by a good deal, but generally travels more frequently. They tend to plan in advanced and have flexibility about when they travel.
- 3) **Leisure** – this segment is the most price sensitive and willing to jump through hoops to get the best deal possible. Leisure markets like Hawaii for example, generally are very elastic and deal seekers drive demand.

Forecasting generally starts at the market level and includes a variety of factors and historical performance datapoints. Translating the forecast into actionable strategies on the flight level becomes much more complex.

For airlines with 10,000+ flights per day, creating or utilizing demand forecasting software is vital to ensure each flight is managed properly. However, for airlines with smaller operations (and capacities) there are several components that can be analyzed to create a general demand profile. This profile includes day of week, time of day, seasonality, holidays, and direction of travel trends. Once the demand profile is created for each flight, a target booking curve can be generated. Target booking curves are a visual tool used to ensure flights are booking at the correct pace and meeting key KPIs. This allows an airline to sell the appropriate mix of leisure and business tickets.

Initial Staging of Flights

Before building the booking curve, the most crucial part of revenue management is ensuring that you have the proper inventory allocation when the flight is initially loaded. Remember that seats on a flight are a perishable good – you have only one chance to sell the seat at the right price before departure, and if the flight departs before a seat is sold you have lost all opportunity to accrue revenue. If you load a peak holiday flight with a high number of low-cost seats, you’ve missed the chance to take a fare premium. Figure 1 illustrates how seats are allocated across three different profiles.

Fare Class	Fare Value	Seat Allocation per Fare Class		
		Weak Demand	Average Demand	Peak Demand
Y	\$399	3	6	9
H	\$249	3	9	12
S	\$199	6	6	6
X	\$149	9	6	3
V	\$99	9	3	0

Figure 1: Stock Inventory Template for 30 Seat Aircraft

Identifying Outliers

Once a target booking curve is established, it is possible to create “guardrails” to alert you to flights that are booking ahead of or behind the curve. By tracking flights throughout the life of the booking window the revenue manager can identify flights that are booking too fast or too slow based on their demand profile. Flights that are booking ahead of the curve are selling too many low-priced tickets, and the lower valued inventory should be removed from sale. Flights that are booking behind the curve are typically not offering enough low fare products; in general, cheaper fares should be offered.

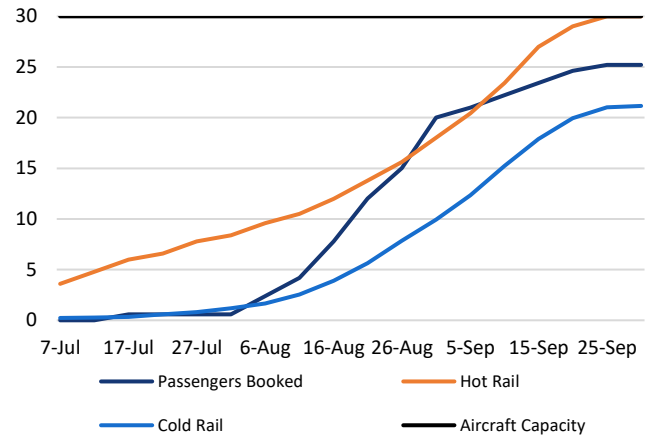


Figure 2: Booking Curve with Guard Rails

Figure 2 provides an example of a typical flight and how after establishing the guardrails, an analyst would ‘flag’ these flights and adjust. There are revenue management systems that can flag thousands of flights, or even be automated with business rules to adjust. For smaller operations, these flags can be done with simple excel tools.

In this example:

- On August 1st, the flight falls below the ‘cold’ guard rail. The analyst opens more lower fare inventory
- On September 1st, the flight starts booking above the ‘hot’ guard rail. The analyst then closes discount inventory.
- On September 29th, the flight flies within the target range

While this example is relatively simple, experienced revenue managers can make thousands of micro-adjustments during a single month, typically reviewing a single flight several times from the point it starts selling to the time it flies.

CASE STUDY: REVENUE MANAGEMENT IN PRACTICE

Embark manages the Revenue Management function for several of our clients. One airline, while in operation for almost 20 years, had never fully utilized revenue management strategies. As a nine-seat operator the airline was not sure if Revenue Management could have a meaningful impact to their bottom line, or if it would create more work than worth.

Our Approach

Leveraging the strategies discussed in this article, Embark developed a plan to revenue manage the airline more effectively. New reporting was created to track key KPIs (such as RASM and advanced bookings) and a demand profile was created for each route. Utilizing historical data, we drilled into micro level data analyzing day of week, time of day, and directional performance, as well as the macro level, taking into consideration market seasonality and both local and national holidays. Armed with an updated demand profile, we adjusted stock inventory throughout the system and fine-tuned flights throughout their sales window.

The Results

While revenue performance improved in the first month, year over year gains continued to improve throughout the year. As we refined the inventory strategy and gained a better understanding of market dynamics, we improved year over year performance from ~3% the first month, to nearly 25% by the end of the year. First year revenue improvement totaled 13%.

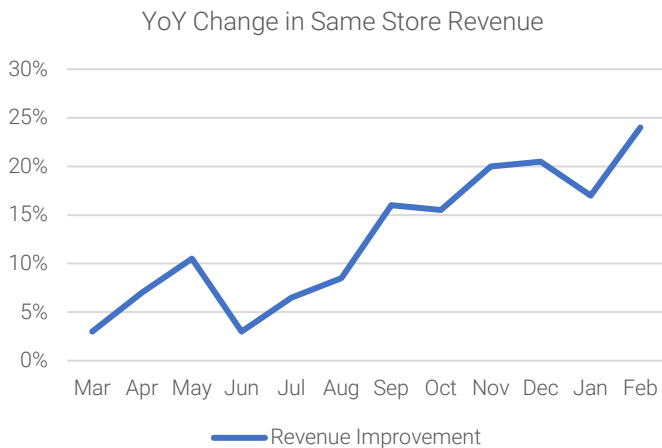


Figure 3: YoY Revenue improvement

CONTACT US

No matter what the revenue management approach, the fundamentals are the same. Embark is more than a consulting firm; we help craft airline business strategy - then work with our partners to make it a reality. Embark provides airlines with (short-term or long term) outsourced support across any commercial function. Our Revenue Management team has extensive experience helping airlines review, optimize and develop industry standard revenue management strategies adapted to the airline's business model. Our experience comes from nearly two decades of practice at major carriers including: Alaska, American, Horizon, Delta and US Airways. Connect with us today to learn more about how we can take your airline to new heights.

Contact our team via phone or email and we'd be happy to discuss how we can work together to support your needs.

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