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**YIELD  
MANAGEMENT**  
*A Strategic Tool for the  
Travel Industry*

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Yield management is a process used to increase revenues by controlling the number of sales to various customer types. Within the airline industry, yield management has been described as "selling the right seats to the right customers at the right prices" (AMR 1987 annual report). Yield management was developed in the airline industry, but it has been successfully applied to the hotel, car rental, cruise line and package tour industries. Yield management is generally applied in situations where a limited inventory of services (such as airline seats) are reserved in advance by a variety of customer types. Because the value of any reservation depends on the service requested and the customer type, the service provider can increase revenues and profitability by accepting the best number of reservations from each customer type. The concepts and application of yield management will be described in the context of the airline industry. Applications to other sectors of the travel industry will then be reviewed.

### Planning Functions

Yield management is the most operational aspect of the marketing planning process. For the airlines, this process consists of three steps. First, the schedule establishes what products the airline will sell. Second, the pricing structure determines how the marketplace will be segmented (using booking restrictions) and the value of each product (the fares). Third, yield management determines how much of each product will be put on the shelf for sale (the store-front is the reservation system). While the schedule and price tend to be long-term strategic decisions, yield management is an operational process. The pricing structure for a given market is generally set for a three- to six-month season. By adjusting reservation availability for each class, yield management can control the minimum price available for any itinerary for any future flight. As a result, the pricing structure can be tailored to the specific demand for every future departure of every flight.

#### Futurescope

Yield management—the process of controlling the number of sales to different customer types—can be the source of maximum profitability in good times and can provide the margin of safety and survival during economic downturns. Successful organizations in the travel industry will adopt some form of the strategic perspective of yield management in the future.



The objective for yield management is to determine the number and mix of reservations for each future flight that will maximize revenue and profitability. This is done in three ways. First, yield management determines how many total reservations should be sold for a future flight. This often involves overbooking to offset the effects of cancellations and no-shows. Second, yield management determines how many reservations to sell in each of the various classes. Questions such as how many first class versus coach reservations should be offered for sale, and how many within coach, how many full fare versus discount reservations should be sold are addressed. Finally, yield management determines how many reservations to make available to the various passenger itineraries on the flight. A passenger itinerary is the origin-destination market for the passenger. A given flight may serve many different markets. For example, a flight from Austin (Texas) to Dallas/Fort Worth (DFW) serves the local Austin to DFW market. It also serves Austin to any city that can be reached from DFW via connections. For example, Austin-DFW-New Orleans, Austin-DFW-Boston, Austin-DFW-London. The customers in each of these markets have widely different values to the airline.

### Decision Making

Yield management decisions are made using the following process:

1. Collect and store history. For each flight, reservation booking patterns are collected at various points prior to departure. Actual traffic and revenue for departed flights are also collected and stored. These data are used to determine reservation demand and value.
2. Review current booking patterns for future flights. The number and mix of reservations booked for all future flights are reviewed. This is used to determine actual, current reservation demand and supply.
3. Forecast future passenger behavior. Forecasts of demand, cancellations, no-shows, and standbys are produced by combining data from past flight and the current conditions on future flights.
4. Produce reservation controls. Forecasts of demand are compared to the remaining available supply of seats. From this comparison, opportunities for additional revenue can be determined. Appropriate overbooking limits, discount allocations, and itinerary controls are produced.

Each of these steps can be accomplished manually or by automation in a computer system. Due to the volume of data and the complexity of the decisions, automation is necessary for all but the most basic yield management applications. Demand forecasting and reservation control generation make use of sophisticated mathematical models to estimate future customer behavior and the appropriate response to it.



## Other Applications

Each of the steps described for the airline industry has application in a number of other transportation settings. In its most general form yield management involves controlling reservation sales associated with some future service resources (for example an airline seat) at a certain control point (flight number, departure date), by product type (physically different service such as first versus coach), customer type (business—full fare versus leisure—discount) and customer itinerary (origin—destination). Yield management for other industries can be categorized using similar factors (See Table 1).

For example, in the hotel industry, reservations are controlled for all dates at each location. Reservations are allocated by room type (suite, concierge, standard), rate program (rack rate, corporate, group, qualified discount) and length of stay. Car rental reservations are controlled for all future days at a rental location by car type, rate program, and length of rental. Cruise lines control reservation availability for each future sailing by berth and cabin type. Reservations are controlled for group versus individual bookings by cabin type. Discounts are generally provided through cabin upgrades. Cruise lines often provide air transportation from "gateway cities." The customer itineraries are based on the originating gateway. Pack-

**Table 1** Comparison of Yield Management Applications for Various Industries

Industry	Resource	Control Point	Product	Pricing	Itinerary
Airline	Seat	Flight # Departure Date	Compartment • First • Coach	Booking class • Full fare • Discount	Origin-Destination
Hotel	Room	Location Customer arrival date	Room type • Suite • Concierge • Standard	Rate program • Rack Rate • Corporate • Qualified discount	Length of stay
Car Rental	Vehicle	Rental location Customer arrival date	Car type	Rate program • Rack Rate • Corporate • Qualified discount	Length of rental
Cruise Line	Berth	Ship Sailing date	Cabin type	Individual Group Discounts through cabin upgrades	Originating city for package customers
Package Tour	Flight Seat and room	Departure date Resort location	Room type	Individual Group	Originating city



age tour operators control reservations for all future days within a resort. Reservations are controlled by room type and gateway city. Discounts are generally provided through pricing promotions.

### Strategic Uses

Yield management can provide significant revenue benefits. For a given schedule and price structure yield management can increase revenues by 5 percent to 10 percent depending on the level of demand. The measurable benefits are greatest when demand is high relative to supply, for example, high load factors for airlines, high occupancy for hotels. In situations with strong pricing competition, yield management can be the difference between survival and failure. Without yield management, a price reduction in the market place provides two unprofitable options. First, match the price reduction and risk selling too many seats/rooms at the lower price. Second, don't match and risk market share loss. Yield management provides a third alternative. Match the lower price on a portion of the inventory. Sell the lower price inventory when excess supply is available, restrict the sales of this lower price product when demand is strong.

In any industry, yield management is an integral part of the marketing process. It is more than a computer system or even a department. It is a way of doing business. The day-to-day application of yield management often involves turning away a discount reservation request long before the resource (flight or hotel) is fully booked. This generally goes against the traditional objectives of filling seats or rooms at any price. As a result, a yield management philosophy must become an integral part of the way the organization conducts its business. This requires the support of senior management and constant education of reservations and field personnel. Once successfully integrated within an organization, yield management becomes a necessary component of the marketing process.

