

The Airline Business

by

Paul Stephen Dempsey

Tomlinson Professor of Law

Director, Institute of Air & Space Law

McGill University

Copyright © 2008 by Paul Stephen Dempsey



The Curse and Blessing of Commercial Aviation

The airline business is a **tough business**.

Profit margins are thin, fixed costs are high, capital expenditures are large, government regulation has been unstable, and taxation can be unmerciful.

Demand can be chilled by an outbreak of disease, recession, war or terrorism.

The airline business also is a **glamorous business**. Its technology is breathtaking.

The defiance of gravity, the allure of exotic destinations or primordial geographic domination has drawn investment and managerial talent into the industry at a level surpassing what dispassionate financial analysis seemingly would warrant.



THE IMPORTANCE OF AIR TRANSPORT

- By shrinking the planet, aviation is a principal means of intermingling and integrating disparate economies and cultures, stimulating social and cultural cross-fertilization, economic growth and diversity in an increasingly interdependent global environment.
- Trade and tourism are heavily reliant on this most modern means of transportation. Whole economic sectors (e.g., hotels, automobile rental firms, convention business, and tourist destinations) depend on safe, secure, dependable, efficient and reasonably priced commercial air transportation.
- “Just-in-time” [JIT] inventory has moved to a global scale with the expeditious movement of cargo by air. The economic ripple effect throughout industrial and commercial sectors and geographic regions is profound.



GOVERNMENT AND THE AIRLINE INDUSTRY

- As a fundamental component of the infrastructure upon which economic growth is built—the veins and arteries of commerce, communications and national defense—a healthy transportation system offering reasonable prices and ubiquitous service to the public is vitally important to the health of the nation it serves.
- No nation can aspire to participate in the global economy without safe and dependable airline service. For that reason, throughout history, governments the world over have promoted and encouraged its development by providing infrastructure, research and development, protective regulation, subsidies, and outright ownership of airlines.
- “If it moves, tax it. If it keeps moving, regulate it. If it stops moving, subsidize it.” President Ronald Reagan.

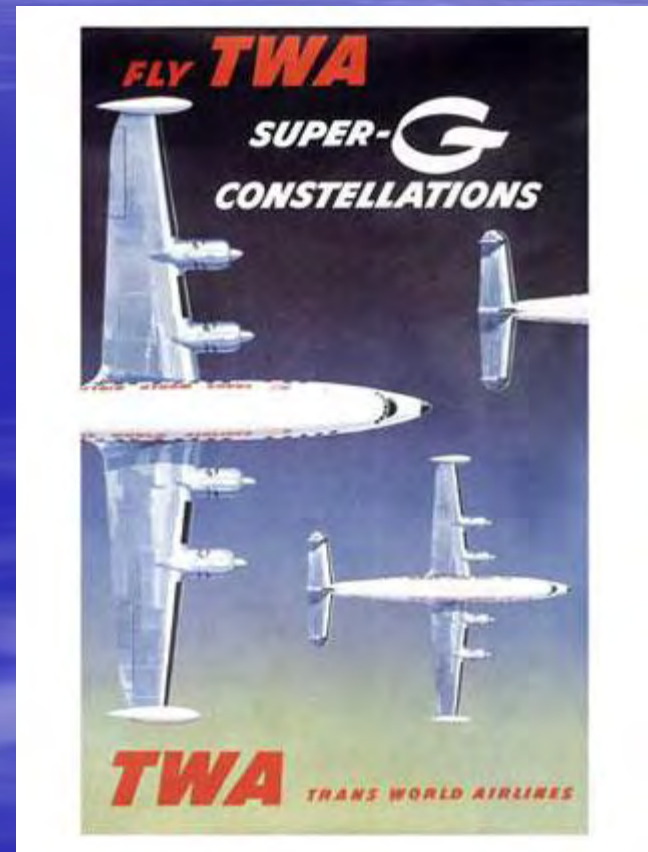


THE SIZE AND SCOPE OF AIR TRANSPORTATION

- At the dawn of the 21st century, more than 1,000 scheduled airlines operate more than 15,000 aircraft. The commercial airline industry carries 1.6 billion passengers and 22 million tons of cargo annually, about 40% of the world's manufacturing exports based upon value.
- Worldwide, civil aviation employs 28 million people, directly, indirectly or induced.
- By 2000, the commercial airline industry accounted for more than a trillion dollars a year in economic activity, directly, indirectly, and induced.
- If the industry were a nation, it would rank seventh in the world in economic production, just ahead of Canada.
- Air transportation is an integral part of the tourism and travel industry, arguably the world's largest single industry.
- The tour and travel industry employs one out of every 15 workers. It accounts for 12.9% of consumer spending and provides 7.2% of worldwide capital investment."

INTERNAL ORGANIZATION

- Marketing,
- Planning,
- Revenue Management,
- Flight Operations,
- Maintenance & Engineering,
- Legal and General Counsel,
- Financial Planning & Analysis,
- Human Resources/Employee Relations,
- Customer Service and Reservations,
- Advertising and Promotions,
- Corporate Communications/Public Relations,
- Properties and Facilities/Airport Affairs,
- Purchasing,
- In-Flight Services,
- Government Affairs,
- International,
- Catering,
- Flight Standards and Training,
- Safety and Security,
- Regional/Area Management,
- Cargo,
- Controller and Treasurer, and
- Secretarial.



External Relationships



Strategic Planning

- *Designate the planning horizon*—Over what time period is the plan to address?
- *Identify goals and objectives*—What are the quantifiable data by which to measure the airline's progress over time?
- *Perform a position audit*—What are the airline's current strengths, weaknesses, and opportunities?
- *Identify the "do nothing" case*—Where will the airline be at the end of the planning horizon if present policies are unaltered?
- *Identify strategic alternatives*—Which are the most promising alternatives building on the airline's strengths and/or shoring up its weaknesses? This requires an evaluation of such factors as customer requirements, demand forecasts, the competition, controllable versus uncontrollable costs, government regulation, infrastructure capacity, fleet composition, financing, and market identity.
- *Evaluate alternatives*—Which of the strategic alternatives appear most or least promising? Which produces the highest levels of net revenue?
- *Perform sensitivity analysis*—The different options should be assessed using pessimistic assumptions.
- *Define the marketing plan*—Identify the specific goals to be achieved, and means by which they are to be achieved.
- *Implement the marketing plan.*
- *Monitor its performance*—Evaluate how well the plan performs and modify it, if necessary, to improve its performance.

THE PLANNING PROCESS

- Define corporate objectives;
- Perform a situation analysis of the strengths and weaknesses of the airline and its competitors, and environmental opportunities and threats;
- Forecast future events;
- Evaluate various alternatives, and their risk/reward probabilities;
- Establish broad strategies to satisfy corporate objectives;
- Formulate specific tactical plans to implement strategies and integrating plans through all departments;
- Execute plans effectively;
- Appraise results; and
- Modify plans as experience dictates



PRODUCT DESIGN



- Customers (business and discretionary passengers, corporations, the government, travel agents, tour operators, consolidators, shippers and freight forwarders);
- Market identity (high or low service, high or low price);
- Route structure (connecting or point-to-point, dense or thin city-pairs, domestic/international);
- Schedule (stage length, flight frequency, aircraft and gate utilization, load factors, fuel consumption);
- Fleet (e.g., age, composition, noise stage, heterogeneous or homogenous, maintenance, reliability);
- Marketing (market share, yield management, distribution network, product lines);
- Finance (return on investment, cash flow, debt/equity ratio, interest coverage, fleet age and percentage leased, working capital, credit availability);
- Cost structure (labor, fuel, distribution);
- Personnel (salary levels, unionization, turnover, training, morale); and
- Environment (demographic, social, economic, regulatory).

High Cost/High Revenue Network Carriers



Versus Low Cost/Low Revenue Point-to-Point Carriers



FOR OUR BEVERAGE
SERVICE, WE'RE PASSING
AROUND THE CAPTAIN'S
BOTTLE OF BOURBON.

NO MOVIES, FOLKS.
INSTEAD, LET ME
ENTERTAIN YOU!
A GUY WALKS
INTO A BAR WITH
A PARROT...

MY MOM'S LEFTOVER
POT ROAST. ENJOY!

THIS IS OUR NEW
LAP CLASS.

WELCOME ABOARD
WHOCARES AIR
Now with more
of less!

HOO
GIVES
A
HOOT!



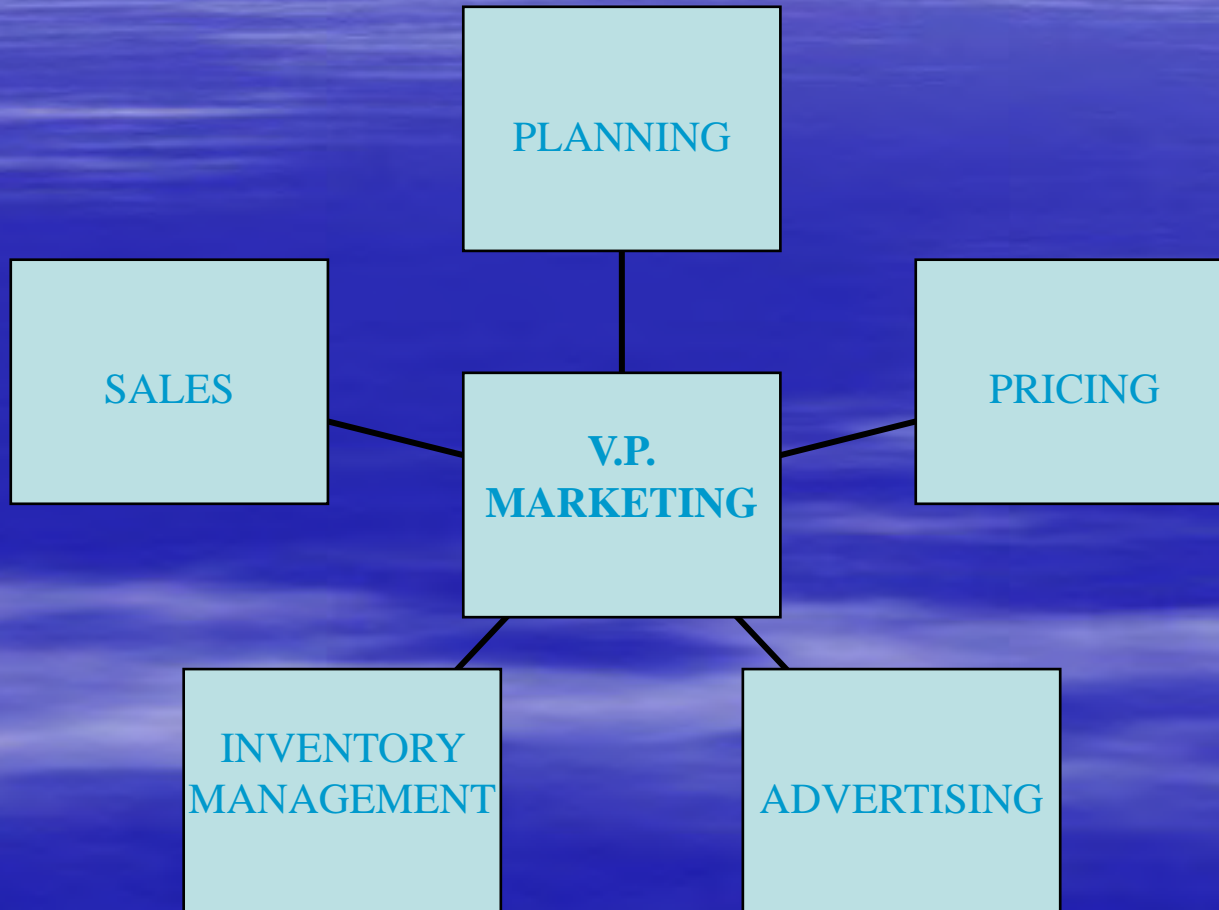
Coordination of Marketing and Operations

- The functional areas of planning—forecasting, scheduling, fleet acquisition, and operations—require coordination between two of the central supply and demand organizational areas of an airline—operations and marketing, respectively.
- One source emphasizes the danger in allowing either to become dominant: “If the operations structure is dominant, an increased integrity of supply results but only with added costs and decreased revenue. If marketing is dominant, capacity and revenues increase, but operating costs rise measurably.”

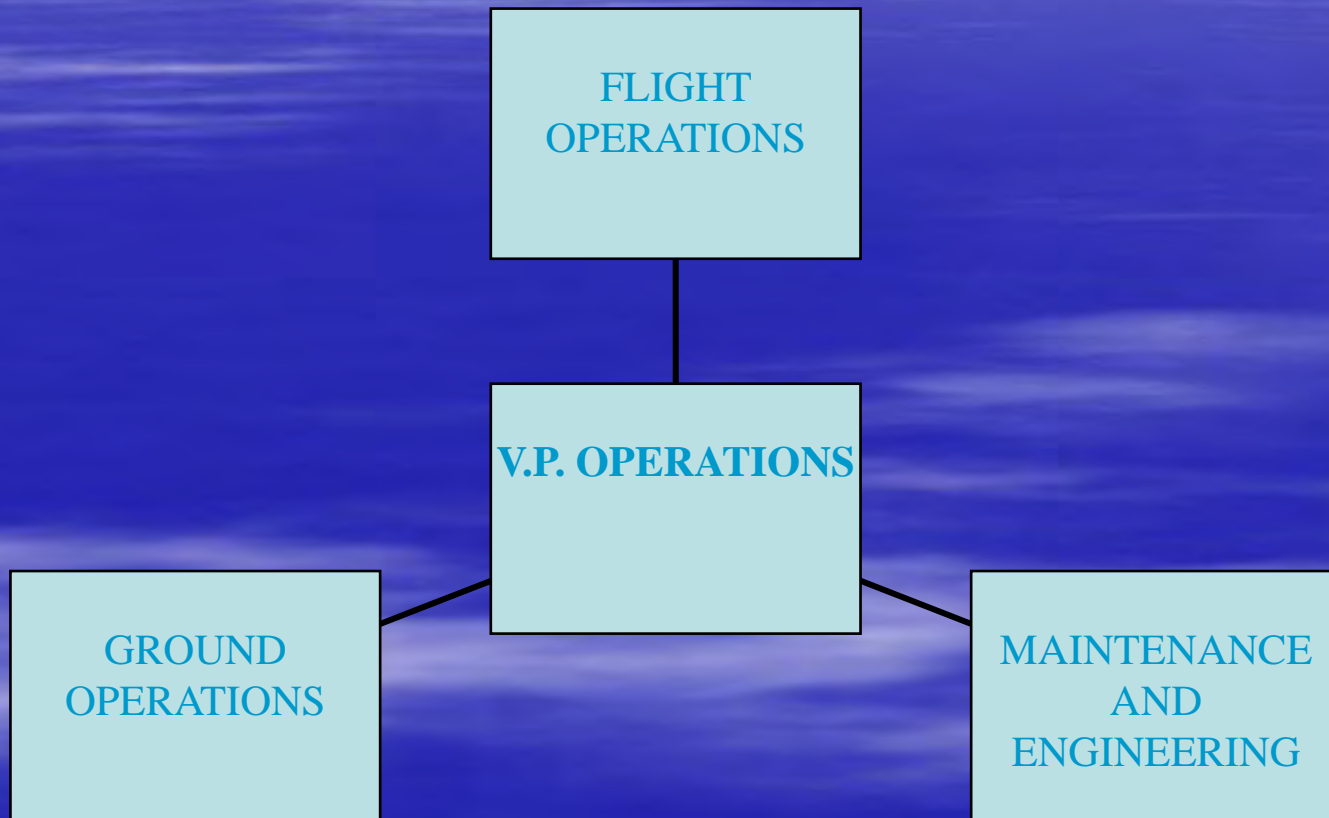


Marketing

“The process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, and services to create exchanges that satisfy individual and organizational objectives.”

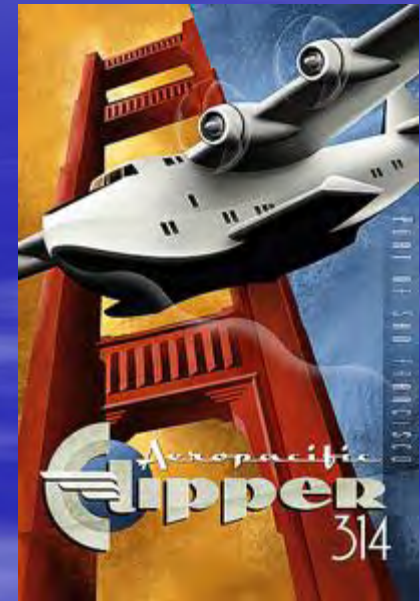


Operations



Product Differentiation

- Between which city-pairs will the carrier operate?
- How frequently, and at what times, will it provide service between these points?
- Will it serve connecting traffic, or instead focus on origin-and-destination passengers?
- Which aircraft types will it fly, and in what interior configuration?
- Will it offer multiple classes of service (for example, dividing the cabin into first, business, and economy classes), and what will be its seat pitch? What will it offer in terms of in-flight amenities (e.g., beverages, reserved seating, meals, and movies)?
- At what price will it offer its product, and with what restrictions?
- How will it distribute its product?



Alternative Models



- *High Fare, Full Service Network Carriers*—These are carriers which offer ubiquitous national and international connecting service distributed through computer reservations systems [CRS] pre-dominantly by travel agents. Examples are the big four U.S. airlines—United, American, Delta and Northwest.
- *Low Fare, High Service Network Carriers*—These carriers which offer widespread connecting service distributed via CRS. An example is Continental, which under Frank Lorenzo had degenerated into a low fare, low service network carrier, but post-Lorenzo, has much improved its service.
- *Low Fare, Low Service Network Carriers*—These are carriers which offer widespread connecting service generally distributed outside CRS and travel agents. Examples include JetBlue.
- *High Fare, High Service Point-to-Point Carriers*—Midwest Express embraced a formula of spacious seating, and gourmet meals, at relatively high prices.
- *Low Fare, High Service Point-to-Point Carriers*—These are carriers which offer good service (ample leg room, meals) in city-pairs, distributed by CRS and travel agents. If high frequencies and low consumer complaints were added to the service analysis, one might add Southwest Airlines to this list, though its seat configuration is tight, and its inflight amenities are nil.
- *Low Fare, Low Service Point-to-Point Carriers*—These are carriers which offer bare bones in-flight amenities with direct product distribution. Examples include the Europe's easyjet, or Asia's Tiger Airways. Though Southwest ranks high in customer satisfaction, it provides its clientele "bare bones" in-flight service.

Revenue and Inventory Management



- *"I think when airlines want to set new fares, they put their people into a room without food or water. And when they start to hallucinate, then they make the fares."*
- Virginia Dean - President, Dean Travel Services

Price Elasticity of Demand



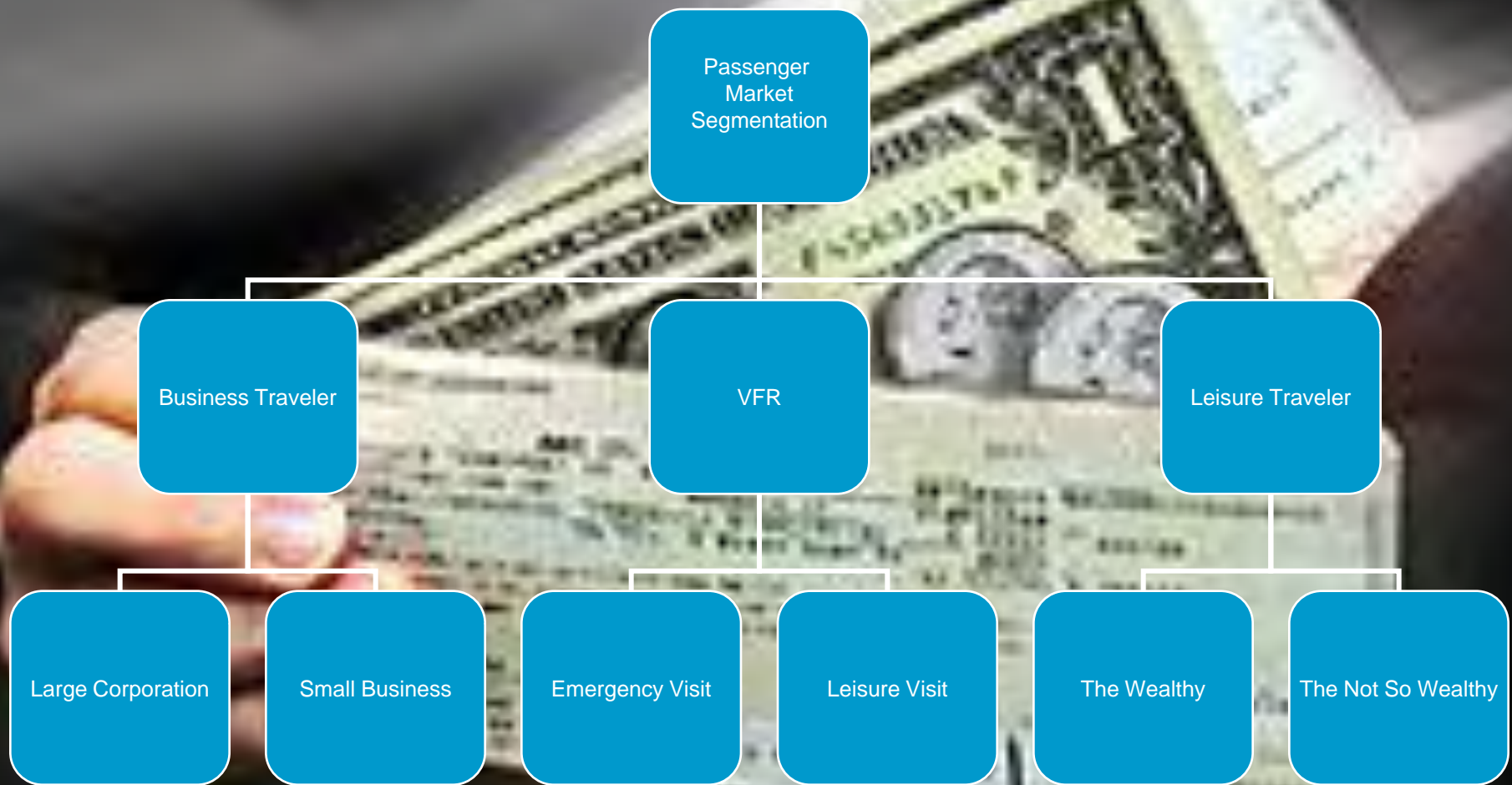
- The concept of *price elasticity of demand* describes the enhanced price sensitivity of a leisure traveler vis-à-vis a business traveler.
- The law of demand suggests consumers will respond to a price decline by buying more of a given product.
- Consumer sensitivity to price change is referred to as *elasticity*.
- When price change gives rise to considerable change in consumption, demand is said to be *elastic*.
- Conversely, if consumers are relatively unresponsive to price change, demand is *inelastic*.



Market Segmentation



- By recognizing that the market is segmented among various classes of travelers with differing demand elasticities, a carrier can tailor a combination of price and service offerings (in this context, travel restrictions) designed both to increase load factors (filling seats which otherwise would fly empty with discretionary travelers) and maximizing yields (charging less price sensitive, or *demand inelastic*, travelers more).
- For example, business travelers are less demand elastic than vacation travelers, because the cost of business travel is borne by their employer rather than themselves, is paid with pre-tax dollars, and the company realizes potential business opportunities if such travel is made.
- In contrast, vacation travel is paid for with post-tax dollars by an individual.



Demand for Air Freight Transport



For cargo, air freight caters to high-value, time-sensitive shipments, because the cost of moving freight by air is high, and many goods can be routed via another mode of transport. If it is of high-value, the goods can absorb the high cost of air freight in its purchase price. If it is time-sensitive (such as perishable fish or flowers), it often must move by air or not at all.



The Relationship Between Price and Cost

- *“Since deregulation . . . the pricing structure has become much more complex. The linkage between costs and prices has been broken. The price of an airline seat has no relationship to the cost of producing it, but rather reflects the degree and nature of competition. Costs and prices have gone their separate ways. In fact, the relationship has been reversed. Airline managements are seeking to lower costs in order to match prices . . .*
“
.
- Dr. Julius Maldutis

The Competition's Influence on Price

- Competition, or the economic cycle, often dictates the price.
- A competing carrier with lower costs, or needing to fill perishable inventory, or to secure an immediate cash infusion may well drive prices down for all carriers, for in a high fixed-cost industry like commercial aviation, none can withstand the loss of large numbers of passengers to its rivals, and will follow the price leader down to preserve market share.
- Consumer information as to the lowest priced seats has been significantly enhanced by the internet – good news for airlines trying to dump unsold inventory, and bad news for their competitors attempting to avoid yield erosion.
- The internet has increased pricing transparency, and caused airlines to drop fares closer to departure to avoid inventory spoilage.

YIELD (REVENUE) MANAGEMENT



- Price is a function of both supply and demand. Price is also related to cost and can heavily influence load factors (both actual and break-even).
- Demand for air transportation services is derived, uncertain, cyclical, directional and highly segmented. Productivity of airline resources is enhanced by a strategy of carrying multidimensional traffic—business, vacation and VFR.
- Since each group of passengers may have a different demand characteristic, an airline seeking both to sell perishable surplus inventory and maximize revenue will develop a yield/inventory (or price/capacity) management system (sometimes referred to as a *revenue management system*).

Revenue Management: How It Works



- *Yield/revenue management* is the process of combining price and inventory controls to maximize revenue.
- It requires assessing future passenger demand (usually based on historical sales data), determining the optimal way to price and allocate seat inventory on each flight, and communicating the resulting price/inventory distribution to distribution and sales outlets. [
- It involves selectively accepting or rejecting sales in order to maximize revenue. As Sabre's Ben Vinod put it, yield management is, "selling the right seat, to the right customer, at the right price, at the right time to maximize system revenues and profitability." [



Revenue Management: How It Works

- The yield manager must attempt to identify the different price elasticities of demand between different classes of travelers to stimulate demand from passengers who would not otherwise fly, while attempting to avoid having passengers with low demand elasticity divert to fares set for passengers with high demand elasticity.
- This is done by coupling the lower fare buckets with restrictions such as advance purchase requirements, day and time of departure, and minimum and maximum stay requirements.
- Advance purchase restrictions are placed on the lower fares in recognition of the fact that leisure travelers can (and usually do) plan vacations well ahead of time. The carrier will also want to restrict the number of seats in every deeply discounted fare bucket, holding higher-yield inventory in reserve to sell to passengers with less flexibility.
- By allocating a larger bucket of price discounted seats to off-peak times and days, price-sensitive passengers can be encouraged to shift their demand to off-peak periods, leaving a larger number of high yield seats for peak demand periods, and improving average load factors.
- In determining whether to discount the price for travel, whether system-wide or in an individual city-pair market, the yield manager must assess the impact of the discount in terms of *traffic generation* (the number of new passengers stimulated by the low fare, usually measured in terms of higher load factors), and on *dilution* (the amount of revenue lost by giving a lower fare to passengers who would have flown anyway at the higher fare). [



Nesting

- The relationship between yields, bookings and break-even load factors is a complex one, the balance of which can be easily upset by energy prices, irrational competitive behavior, and the vicissitudes of the marketplace environment.
- Carriers adept at yield management tend to close out lower fare buckets (e.g., 21-day advance purchase Saturday night stay over) early, particularly during heavy demand periods.
- Under a process termed “*nesting*,” as sales build for a flight, the lower-valued itinerary classes are automatically closed, leaving the higher-yield seats open
- The trick is to avoid selling an excessive number of low-yield seats too early, for this may consume inventory and close out later bookings of higher-yield customers, causing “*spill*” of higher-revenue traffic to a competitor, or the inability to accommodate a potential purchase because capacity has been consumed (usually, the loss of sales to later booking customers because earlier booking customers have consumed available inventory).
- Conversely, holding back an excessive number of seats for potential high-yield customers who may fail to materialize may deprive the carrier of earlier sales to price-sensitive lower-yield customers. This is referred to as “*spoilage*,” a situation where demand for seats exists but, due to misallocation of inventory, they depart empty.



Pricing Proliferation



- In 1979, there were 58,000 domestic air fares. A decade later, there were 4,000,000 domestic air fares.
- Airlines have learned that by watching passenger demand carefully, they can shrewdly manipulate the number of seats for which restricted discounts are offered, and fill seats with passengers paying the maximum price.
- That explains the phenomenon of tens of thousands of rate changes each day. An average day may have 200,000 new fares inputted into CRS, while during a fare war, 1,500,000 fares may be added



Pricing Transparency

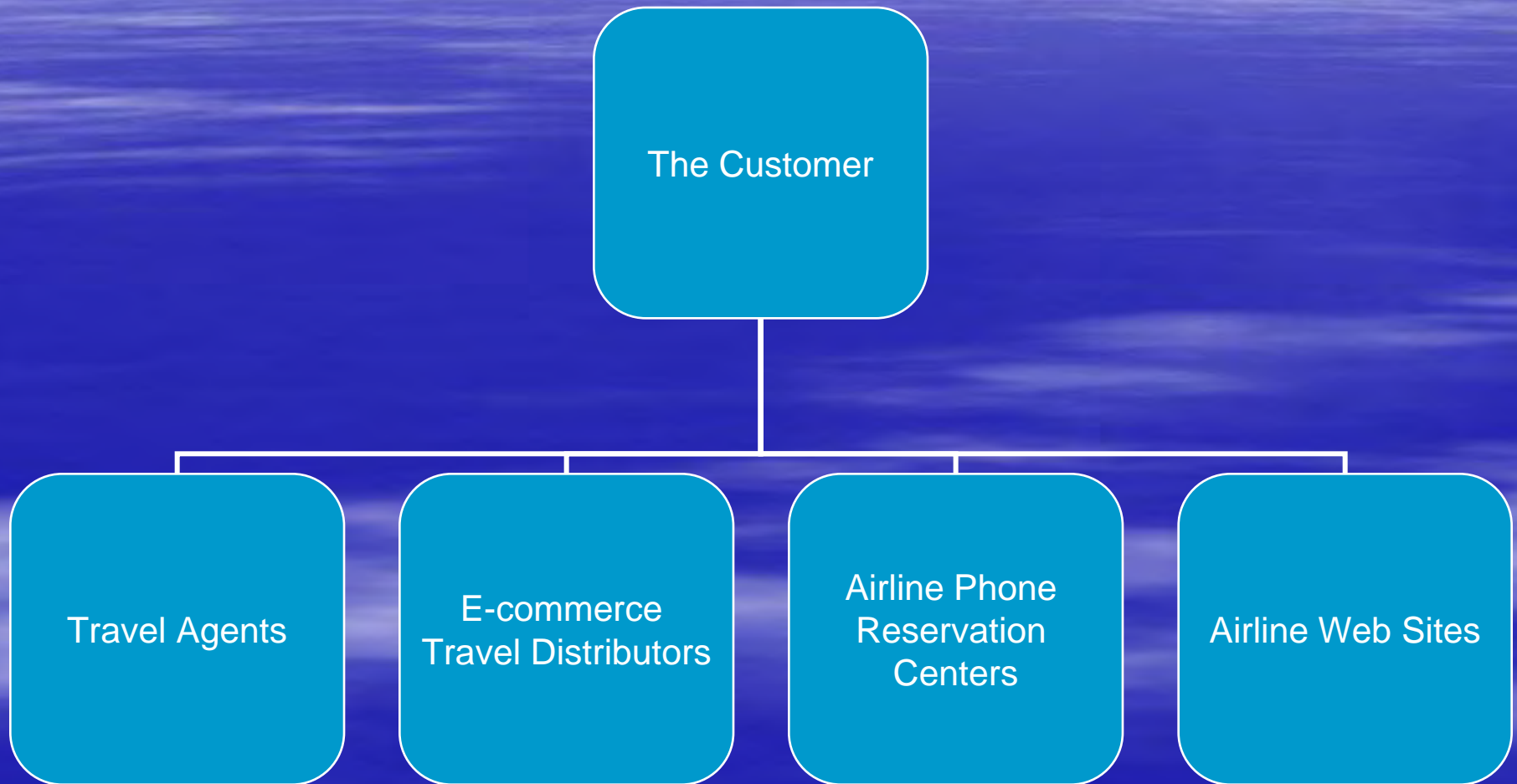


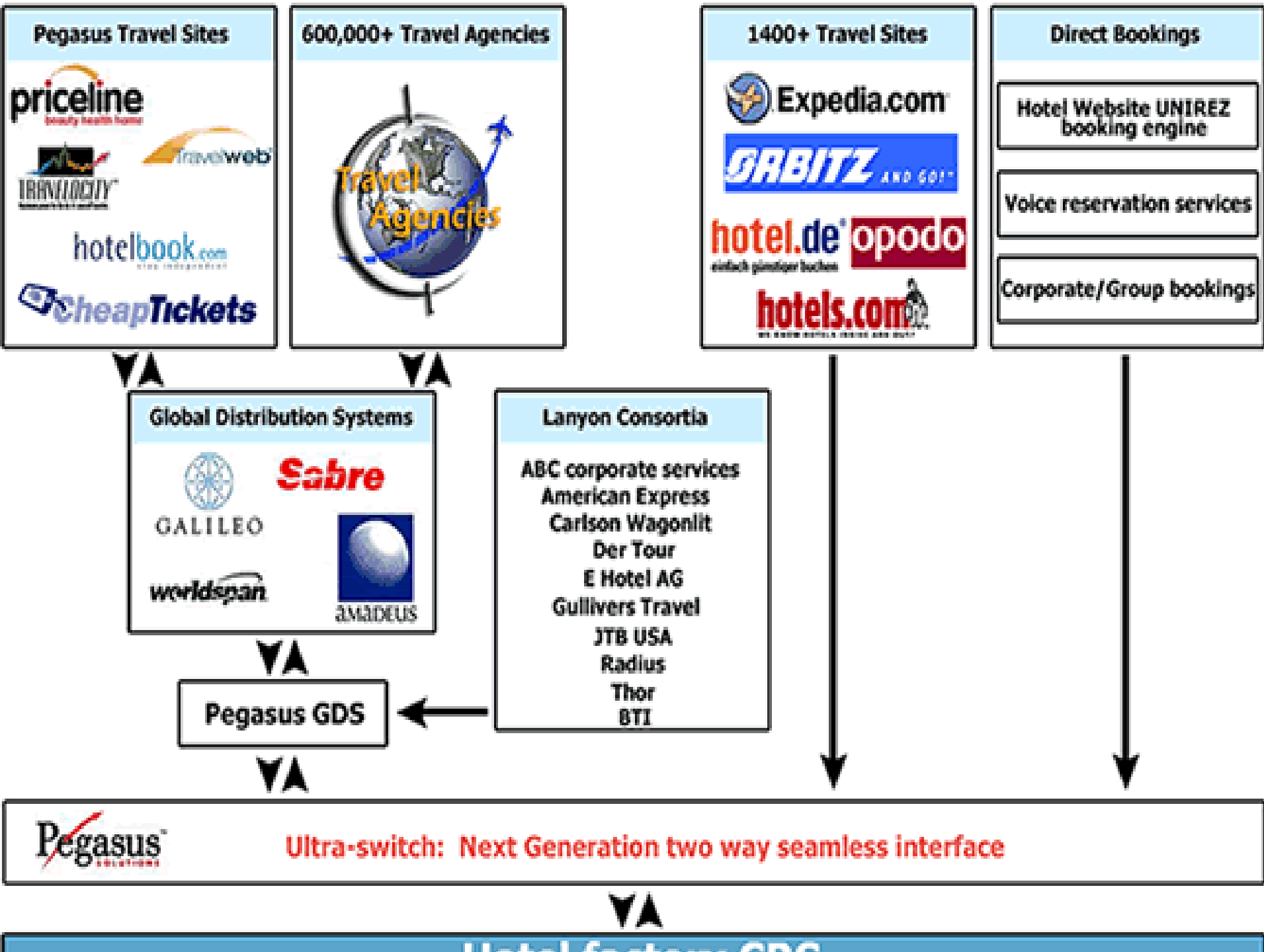
“The accelerated switch to e-commerce and online ticket sales will create market instability. The Internet will give consumers instantaneous and easy access to airline price and service data thereby enhancing consumers’ market power. This will aggravate the downward pressure on tariffs and fares.”

Regis Doganis - Former CEO, Olympic Airways



Distribution Vehicles







Product Distribution



Global Distribution Systems

- Amadeus: 9.2%
- Sabre: 44.7%
- Galileo: 18.7%
- Worldspan: 26.5%

amadeus

Sabre


GALILEO
INTERNATIONAL

worldspan





welcome to the institute of

AIR & SPACE LAW

Postgraduate
Law Degrees
and
Certificate
Programs

www.iasl.mcgill.ca