

Systems Thinking & Problem Solving:

(Understanding Our Most Important Messes)

Change, What's Required for Learning Organizations,
System Dynamics for Going from Issues to Action,
People Express Management Flight Simulator

MGM-315 06/16/04

Bob Powell, Ph.D., MBA

Continuous Improvement Associates

Tel: 599-0977, E-mail: scuba@usa.net

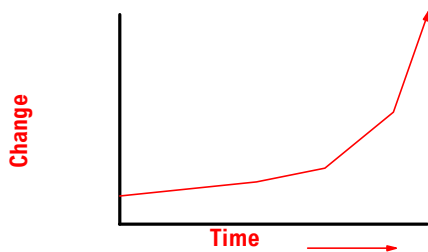
Web: <http://www.exponentialimprovement.com>

Change

Change

"Change isn't what it used to be."

Charles Handy, *The Age of Unreason*



Fleet Capacity (cont.)

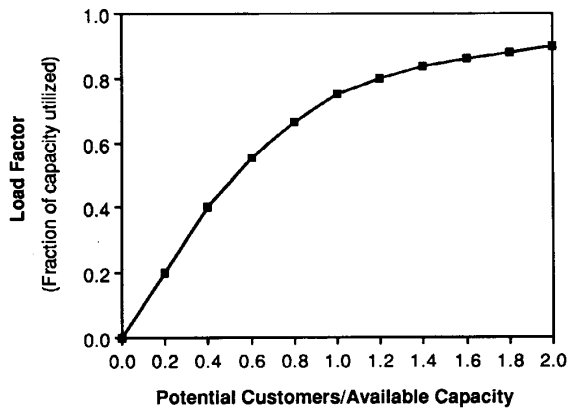
■ Capacity / Customers

- available capacity = # available seat miles in any period
- potential customers = # prospective passengers wishing to fly PE
- passengers carried = # revenue passenger miles actually flown during each time period

■ Load Factor = passengers carried / available capacity

- Industry average load factor is about 58%.
- Potential customers will exceed total passengers carried.
- Initial breakeven load factor at anticipated fare levels is about 60%
(generates profits w/o relying on overbooking more than the industry as a whole).

Load Factor Graphical Function



Human Resources Management

■ No Frills Service

- service scope will be .60 of the full service industry standard

■ Ownership

- every employee is an owner and participates in profit sharing
- turnover will be reduced by the ownership system

■ Cross-utilization and job rotation for higher productivity

■ Self-Management

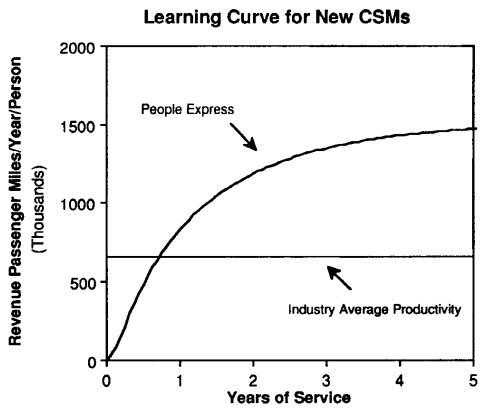
- few layers of management & fewer employees / aircraft average
- CSMs will review their own performance and set their own goals

■ CSM recruitment, hiring, and training

■ The PE learning curve

- hire people who fit the vision and direction of People Express

PE Learning Curve



Cost Structure

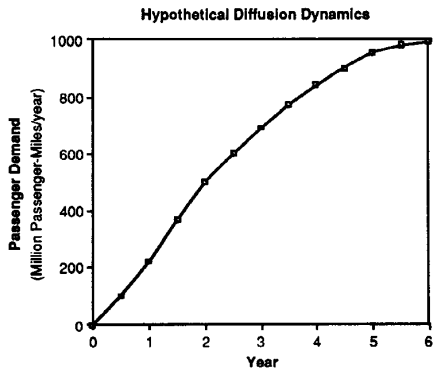
- **Total operating costs:**
 - fleet operations, service, marketing, and interest.
- **Fleet costs:**
 - fuel, maintenance, airport fees, etc.
 - \$5.5 million per aircraft per year.
- **Service costs (human resources):**
 - wages, benefits and taxes, related facilities (computers, telephones, etc.) = \$42,000 per employee / year.
- **Marketing expenditures:** a fraction of revenues.
- **Interest:**
 - Paid on debt = 10 %/yr. Earned on savings = 5%/yr.
- **Depreciation:**
 - a non-cash charge, aircraft depreciated at 6.25 %/yr.

Capitalization and Finance

- **Balance Sheet:**

<ul style="list-style-type: none"> ● <u>Assets</u> Value of fleet Other capital equipment 	<ul style="list-style-type: none"> <u>Liabilities</u> Debt Equity
--	--
- **Cash Flow:**
 - + Revenues
 - Cost of fleet operations
 - Cost of service (employees)
 - Marketing expenditure
 - Interest
 - Net Cash Flow before financing

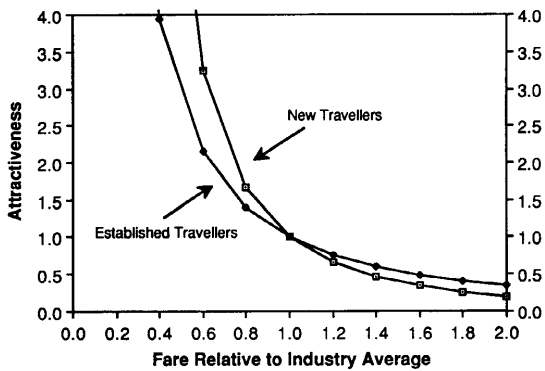
Market Diffusion Dynamics



Market Segments & Attractiveness

- Segments
 - New Travelers
 - Established Travelers
- Market attractiveness
 - Routes and schedule: competitive on routes flown
 - Relative fare: PE profitable at \$.09/seat mile vs. industry average of \$.16/seat mile
 - Scope of service" 60% of industry average
 - reduces attractiveness 20% among EstablishedTravelers
 - but only 5% among New Travelers
- Service Quality - Different for each market segment

Attractiveness from Relative Fare



Competitive Factors

- **Current Industry Fare Structure:**
 - Industry average fare is currently \$.16/seat-mile.
 - PE costs are low; PE profitable at \$.09/seat mile (w/LF = ~60%).
 - A large advantage that the competition will not be able to match by cutting their profit margins alone.
 - To match PE, the competition will have to lower their breakeven points. To do so will be painful, difficult, and time consuming.
- **Long Run Industry Fare Structure**
 - Over time competitors will probably be able to lower their costs (e.g., wage concessions and efficiency improvements).
 - Competitors will imitate some of our human resource policies.
 - However, it will probably take at least two years to close the gap.
 - If PE succeeds, we can expect other new airlines to be formed.

Dynamics of Competitive Response

- **As long as People Express is only a small player in the market, we do not expect the competition to respond.**
- **While PE is small, the costs to the competition of lowering prices will be prohibitive: to punish PE by cutting their prices will reduce revenues across their much larger customer base.**
- **However, as PE market share increases, we expect the competition to intensify cost-cutting efforts.**
- **The larger PE's market share, the faster we expect competitors to respond (at the fastest ~2 years).**

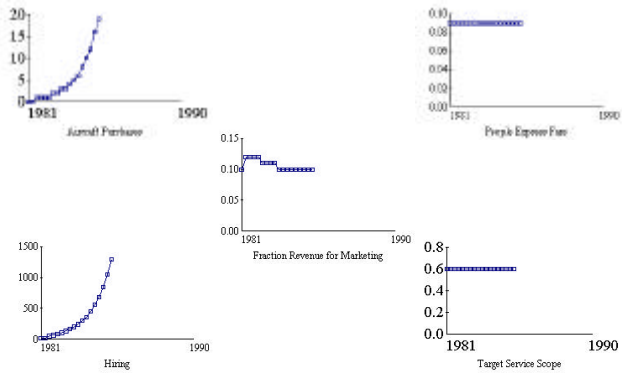
Hap Pareti's Strategy

- **"We thought we'd start by leasing three little DC-9's and flying them for a few years until we made enough money to buy a plane of our own." HBR Case Study**
- **Pareti's strategy means**
 - no additions to the fleet or staff,
 - low prices and
 - moderately aggressive marketing.
- **Run Simulation of Pareti strategy**

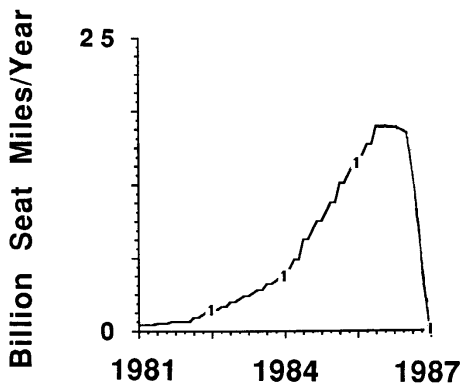
Don Burr's Strategy

- Prices low at \$.09/seat-mile from the beginning.
- Target scope of service at 0.60.
- Expand the fleet aggressively (about 100%/year), hiring people at a comparable rate.
- Market aggressively, particularly in the beginning (12% of revenues at the beginning, falling to 10% as load factor rises).
- Note results of Burr's strategy.

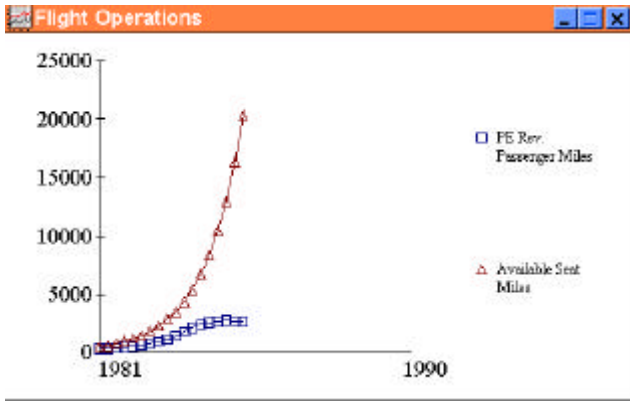
Decisions for Don Burr's Strategy



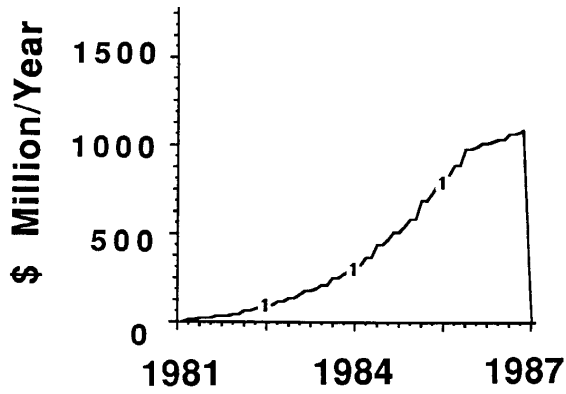
People Express Historic Capacity



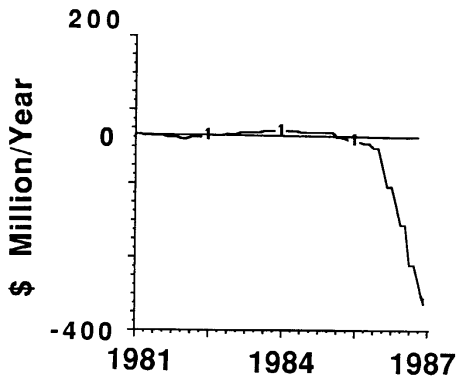
Don Burr Simulation Capacity



People Express Historic Revenue



People Express Historic Profits



Run Simulation Experiment(s)
