

Service Operations (SO)

Post Graduate Program for Working Executives 2014-15

Week 6

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09/11/2014

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Agenda

- Recap
- Managing capacity and demand
 - Managing demand variability
 - Yield Management
- Service Encounter triad
- Service firm videos

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Recap

- Service characteristics
- Strategic service vision
- Service package
- Service blueprinting
- Service quality
- MID TERM

Variability is the only constant

- Decision making under uncertainty
- Newsvendor model?

Generic strategies

- Level strategy
 - Power stations
 - Managing demand
- Chase
 - Managing supply
 - Call centres

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MANAGING DEMAND

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Customer induced variability

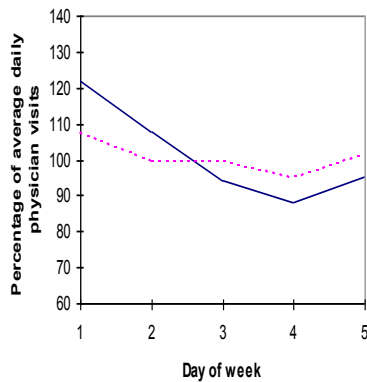
- Arrival variability
 - Provide generous staffing or require reservations
- Capability variability
 - Adapt to customer skill levels or target customers based on capability
- Request variability
 - Cross-train employees or limit service breadth
- Effort variability
 - Do work for customers or reward increased effort
- Subjective preference variability
 - Diagnose expectations or persuade customers to adjust

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Segmenting Demand at a Health Clinic



Smoothing Demand by Appointment Scheduling

Day	Appointments
Monday	84
Tuesday	89
Wednesday	124
Thursday	129
Friday	114

Discriminatory Pricing for Camping

Experience type	Days and weeks of camping season	No. of days	Daily fee
1	Saturdays and Sundays of weeks 10 to 15, plus Dominion Day and civic holidays	14	\$6.00
2	Saturdays and Sundays of weeks 3 to 9 and 15 to 19, plus Victoria Day	23	2.50
3	Fridays of weeks 3 to 15, plus all other days of weeks 9 to 15 that are not in experience type 1 or 2	43	0.50
4	Rest of camping season	78	free

EXISTING REVENUE VS PROJECTED REVENUE FROM DISCRIMINATORY PRICING

Experience type	Existing flat fee of \$2.50		Discriminatory fee	
	Campsites occupied	Revenue	Campsites occupied (est.)	Revenue
1	5,891	\$14,727	5,000	\$30,000
2	8,978	22,445	8,500	21,250
3	6,129	15,322	15,500	7,750
4	4,979	12,447
Total	25,977	\$ 64,941	29,000	\$59,000

Managing demand

- Promoting off peak demand
- Developing complementary services
- Reservation systems and overbooking

Overbooking

- Need for overbooking
- Fairness concerns
- Pros and cons v/s waitlisting

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Hotel Overbooking Loss Table

No-shows	Prob-ability	Number of Reservations Overbooked									
		0	1	2	3	4	5	6	7	8	9
0	.07	0	100	200	300	400	500	600	700	800	900
1	.19	40	0	100	200	300	400	500	600	700	800
2	.22	80	40	0	100	200	300	400	500	600	700
3	.16	120	80	40	0	100	200	300	400	500	600
4	.12	160	120	80	40	0	100	200	300	400	500
5	.10	200	160	120	80	40	0	100	200	300	400
6	.07	240	200	160	120	80	40	0	100	200	300
7	.04	280	240	200	160	120	80	40	0	100	200
8	.02	320	280	240	200	160	120	80	40	0	100
9	.01	360	320	280	240	200	160	120	80	40	0
Expected loss, \$		121.60	91.40	87.80	115.00	164.60	231.00	311.40	401.60	497.40	560.00

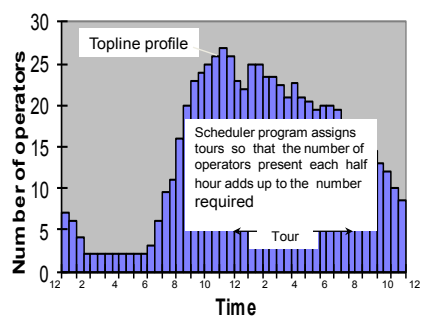
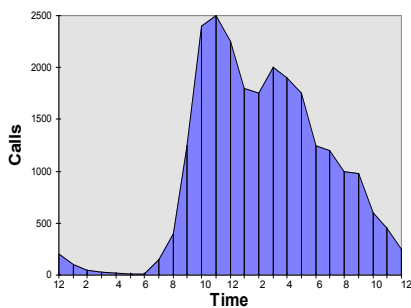
MANAGING SUPPLY

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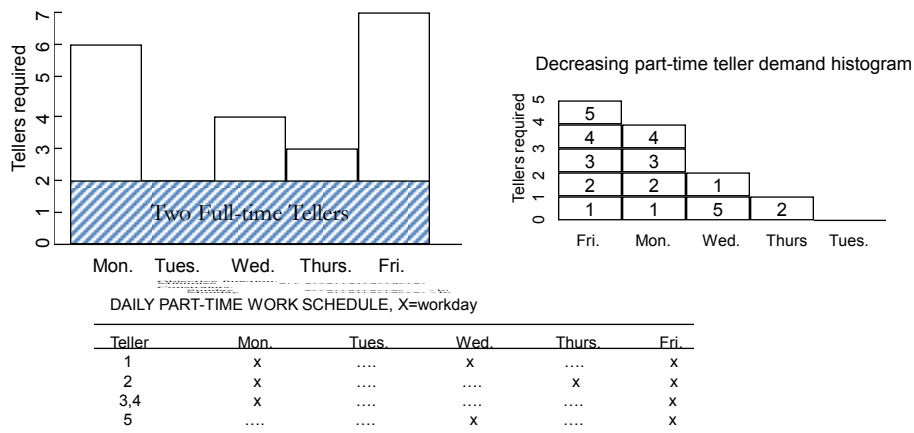
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Daily Scheduling of Telephone Operator Workshifts



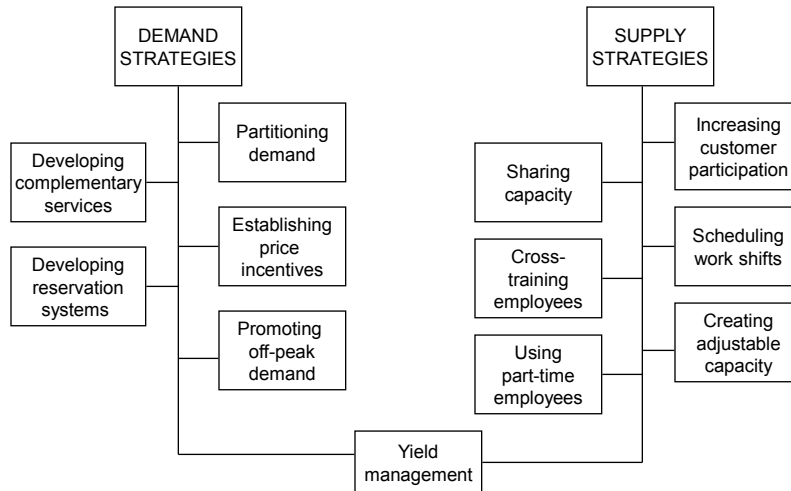
Scheduling Part-time Bank Tellers



Managing supply

- Increasing customer participation
- Creating adjustable capacity
- Sharing capacity
- Cross training employees
 - Using part time employees

Strategies for Managing Demand



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Yield Management

- “Selling the right capacity to the right customer at the right price”
- Business Requirements
 - Limited Fixed Capacity
 - Business environment where YM can help
 - Ability to segment markets
 - Perishable inventory
 - Advance sales
 - Fluctuating demand
 - Accurate, detailed information systems

Industries that Fully Use YM Techniques

- Transportation-oriented industries
 - Airlines
 - Railroads
 - Car rental agencies
 - Shipping
- Vacation-oriented industries
 - Tour operators
 - Cruise ships
 - Resorts
- Hotels, medical, broadcasting

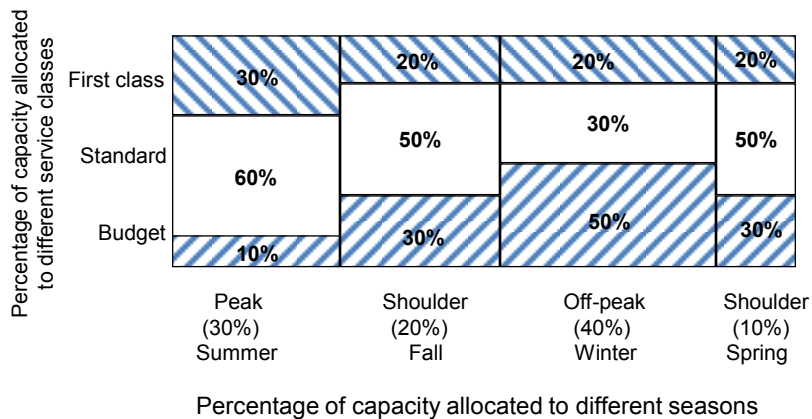
Elements of a Yield Management System

- Lingo
 - Reservation prices
 - Fare Bucket
 - Protection level
 - Nesting
- Littlewood's rule
- EMSR a and EMSRb

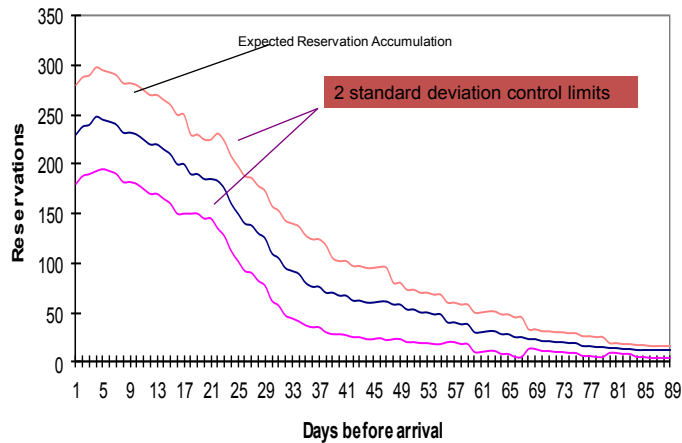
Four Types of Fares

Fare Type:	<u>BUSINESS</u>	<u>COACH</u>	<u>DISCOUNT</u>	<u>PROMOTION</u>
Prices:	250-140%	140%-70%	60%-30%	40%-25%
Letter codes:	F, C, J	Y	H, Q, M	K, V
Commissions:	10%-30%	10%-15%	10%-15%	0%-10%
Seat size:	BIG	small	small	small
Service:	high	normal	normal	normal
Early Purchase?	0 days	0 days	14-30 days	30-60 days
Refundable?	yes	yes	partial	no
Min. Stay?	no	no	7-14 days	7-14 days
Days "full":	under 5%	under 5%	5%-50%	20%-80%
Typical user:	business	business	holiday	group
Elasticity:	-0.5	-0.7	-1.4	-2.0

Seasonal Allocation of Rooms by Service Class for Resort Hotel



Demand Control Chart for a Hotel



Considerations while devising fare structures

- Dilution
- Displacement
- Share-shift
- Stimulation

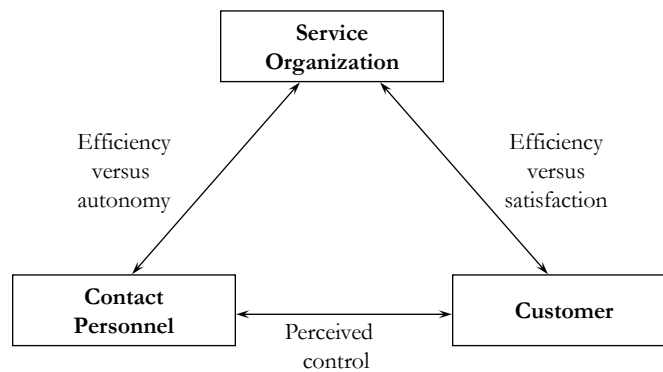
American Airlines case

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The Service Encounter Triad



THANK YOU

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