

Post Graduate Diploma in Management – 2020
Covid – 19 Term

Strategic Capacity Management

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Operations Management

Friday, August 28, 2020



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What is common?

Have you experienced problems with a service because of inadequate labor or equipment capacity?

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Capacity

The ability to hold, receive, store, or accommodate

Capacity is the capability of a manufacturing or service resource such as a facility, process, workstation, or piece of equipment to accomplish a purpose over a specific period.

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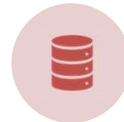
How do you measure capacity?



PAPER MILL



HOSPITAL



SERVER
STORAGE



AUTOMOTIVE
PLANT



MAX OUTPUT PER
UNIT TIME



UNITS OF
RESOURCE
AVAILABILITY

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Examples of Short- and Long-Term Capacity Decisions

Short-Term Capacity Decisions	Long-Term Capacity Decisions
<ul style="list-style-type: none"> • Amount of overtime scheduled for the next week • Number of pizza delivery workers to hire on Super Bowl Sunday • Number of ER nurses on call during a downtown festival weekend • Amount of warehouse space to rent for new promotional items • Number of call center workers to staff during the holiday season 	<ul style="list-style-type: none"> • Construction of a new manufacturing plant • Expanding the size and number of beds in a hospital • Number of branch banks to establish in a new market territory • Closing down a distribution center • Changing the cooking technology in a chain of fast-food restaurants • Adding a 20-ton stamping machine

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Capacity Planning Concepts

- **Capacity utilization rate:** a measure of how close the firm is to its best possible operating level
 - $Capacity\ Utilization\ rate = \frac{Capacity\ used}{Best\ operating\ level}$
- **Economies of scale:** the idea that as a plant gets larger and volume increases, the average cost per unit tends to drop
- **Diseconomies of scale:** at some point, the plant becomes too large and average cost per unit begins to increase

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Strategic Capacity Planning



Determining the overall level of capacity-intensive resources that best supports the company's long-range competitive strategy


- Facilities
- Equipment
- Labor force size



Capacity level selected has a critical impact on response rate, its cost structure, inventory policies, and management and staff support requirements

- Too low and the firm will lose customers and encourage competitors
- Too high and firm may have to cut costs or underutilize its capacity

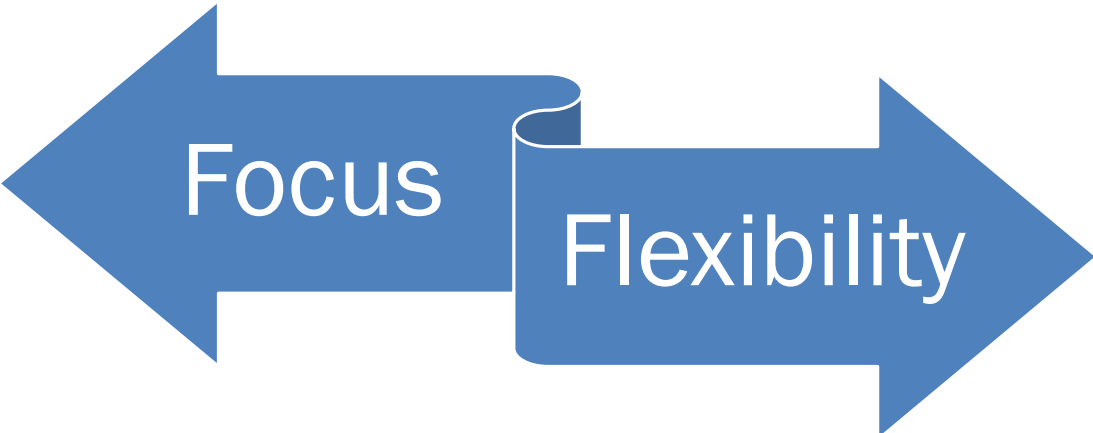
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Capacity Management Concepts



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Capacity Focus

- A few key products
- A specific technology
- A certain process design and capability
- A specific competitive priority objective such as next day delivery
- Particular market segments or customers and associated volumes

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Capacity Flexibility

Flexible Plants

- Ability to quickly adapt to change
- Zero-changeover time

Flexible Processes

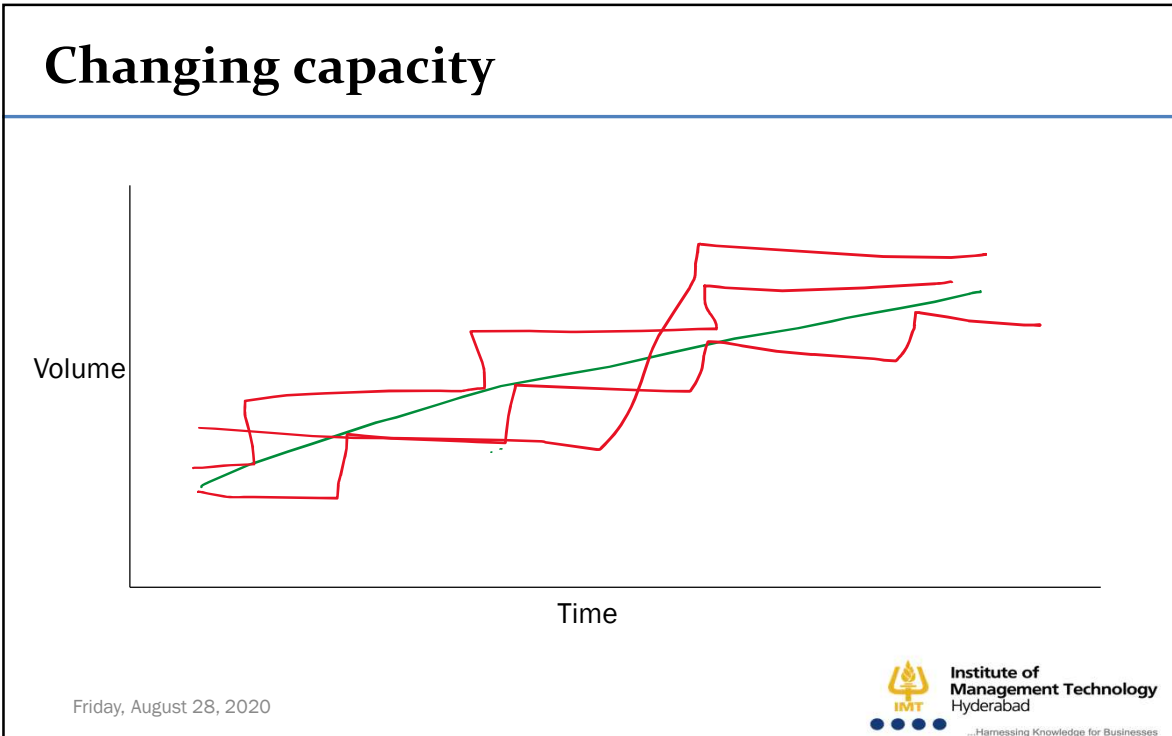
- Flexible manufacturing systems
- Simple, easily set up equipment

Flexible Workers

- Ability to switch from one kind of task to another quickly
- Multiple skills (cross training)

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Considerations in Changing Capacity

Maintaining System Balance

- Similar capacities desired at each operation
- Manage bottleneck operations

Frequency of Capacity Additions


- Cost of upgrading too frequently
- Cost of upgrading too infrequently

External Sources of Capacity

- Outsourcing
- Sharing capacity

Decreasing Capacity

- Temporary reductions
- Permanent reductions



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Frequent versus Infrequent Capacity Expansions

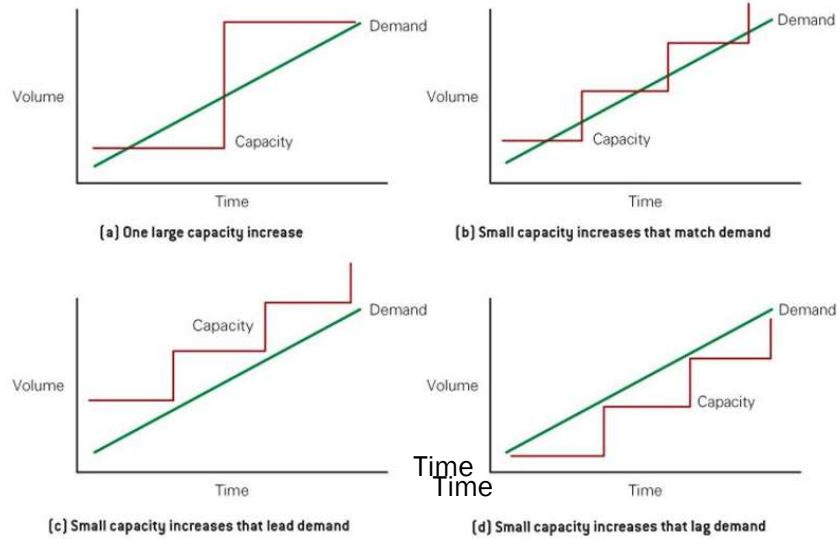


Exhibit 5.2

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Group Project

- Make an original video which would demonstrate your understanding of the concepts you learnt during the course.
- The video could be a role play, analysis of operations of a company or interviews with practicing managers on concepts relating to the course. The total duration (including credits and titles) of the video should be at least 8 minutes but should not exceed 15 minutes.
- Evaluation would be based on depth of understanding of course concepts, number of course concepts applied, team effort and originality & innovativeness of the idea. Narration, if required, should be done by the group members only.
- Sources of clips, pictures borrowed from internet should be clearly cited and relevant links must be provided in a separate word document along with the submission.

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Group Project - Samples

- Here are some samples of how the videos could look like.

<https://www.youtube.com/watch?v=yEudyDh-z6g&feature=youtu.be>

<https://www.youtube.com/watch?v=W AoGhp5-h3w&feature=youtu.be>

<https://www.youtube.com/channel/UCOvMGqaxxyXXmZqBu6hDAuQ>

https://www.youtube.com/watch?v=QgfWp_3ozVw

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