

Responsive Supply Chains

- Delayed Differentiation
- Read-React Capabilities

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Delayed Differentiation - Postponement

- Modular Product Design
- Modular Process Design
- Agile Supply Network

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Supply Chain Design

- Degree of proximity to Customers
- Degree of Centralization
- Degree of Flexibility
 - Capacity Flexibility
 - Logistical Flexibility
 - Multi-sourcing
 - Postponement
 - Read React Capability

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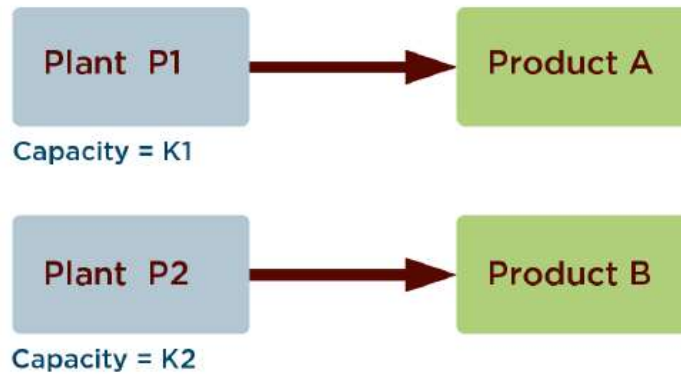
How do the costs work out?

- $C_d > C_f$ – Domestic manufacturing is expensive
- $L_d < L_f$ (in weeks) – Domestic lead time is lower
- Weekly Demand $\sim N(M, s)$
- h – holding cost per unit per week
- Replenishment cycle – 1 week
- Overall Cost Domestic = $C_d * M + h * z * s * \text{Sqrt}(L_d + 1)$
- Overall Cost Foreign = $C_f * M + h * z * s * \text{Sqrt}(L_f + 1)$

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Dedicated Supply Chains for Two Products



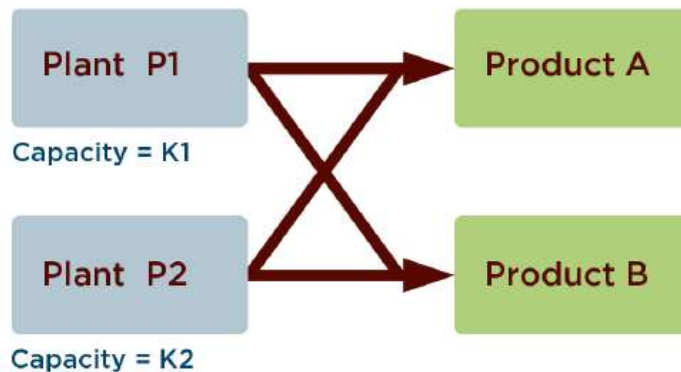
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Flexible Supply Chains for Two Products



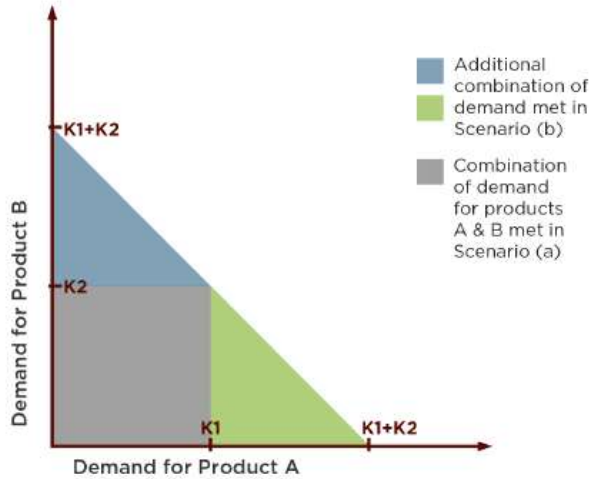
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How Flexibility Increases Capacity



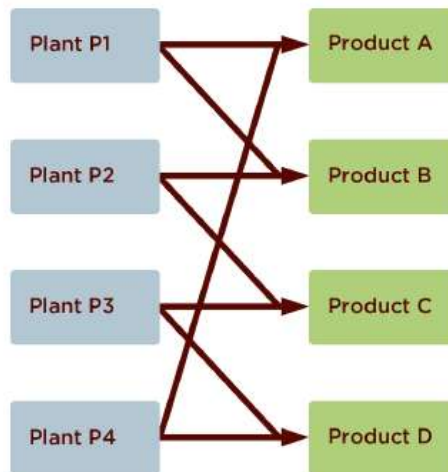
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A Shortcut to Capacity Flexibility



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