

UNIT 5

## **Design for Manufacturing and Supply Chain**

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# Design for Manufacturing and Supply Chain

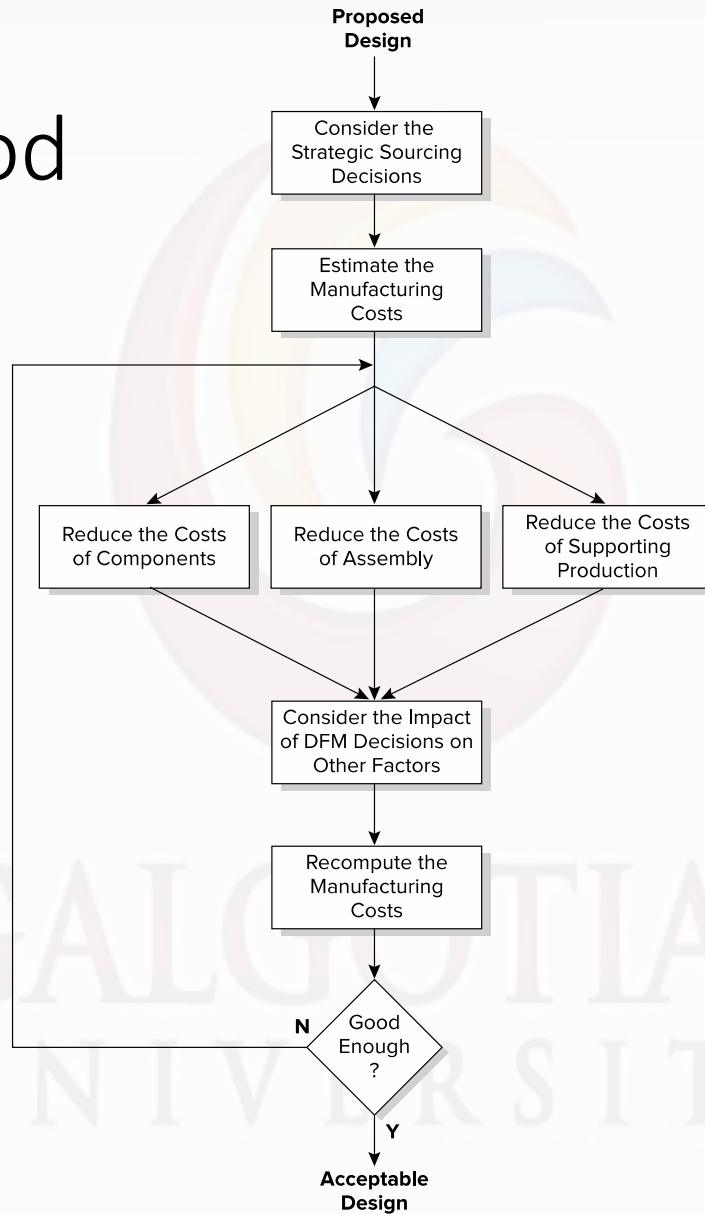
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# Design for Manufacturing and Supply Chain Example

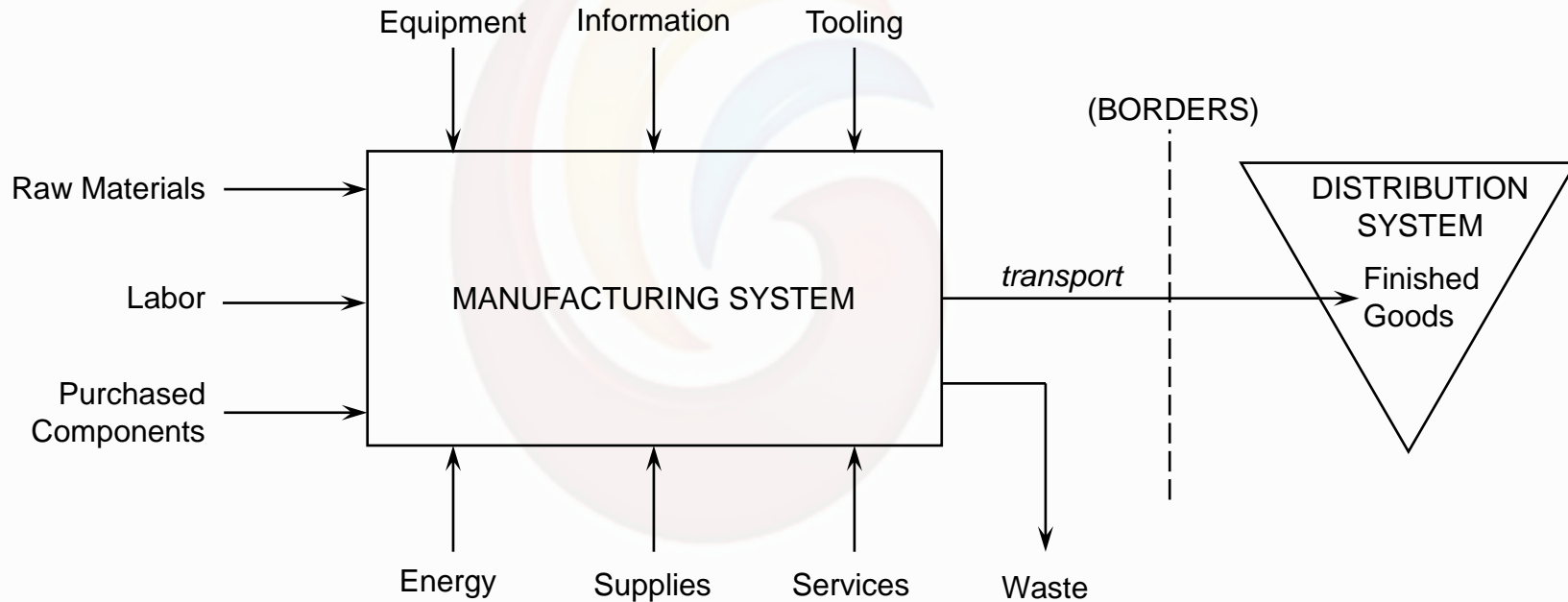


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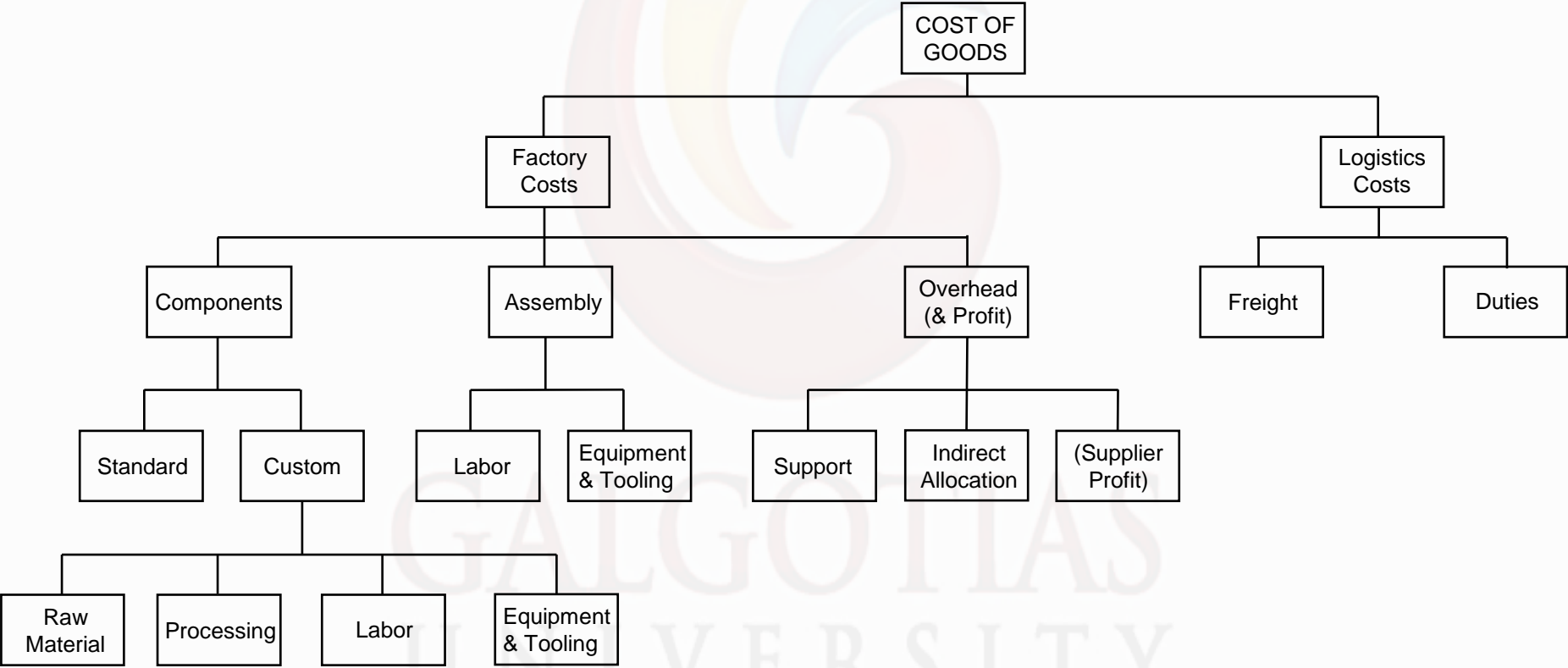
# DFM Method



# Manufacturing and Supply Chain System



# Cost of Goods Breakdown



# Product Development Process



How do we consider manufacturing and supply chain issues throughout the development process?

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# Definition

- **Design for manufacturing (DFM) is a development practice emphasizing manufacturing and supply chain issues throughout the product development process.**
- **Successful DFM results in lower production cost and robust supply chain, without sacrificing product quality.**





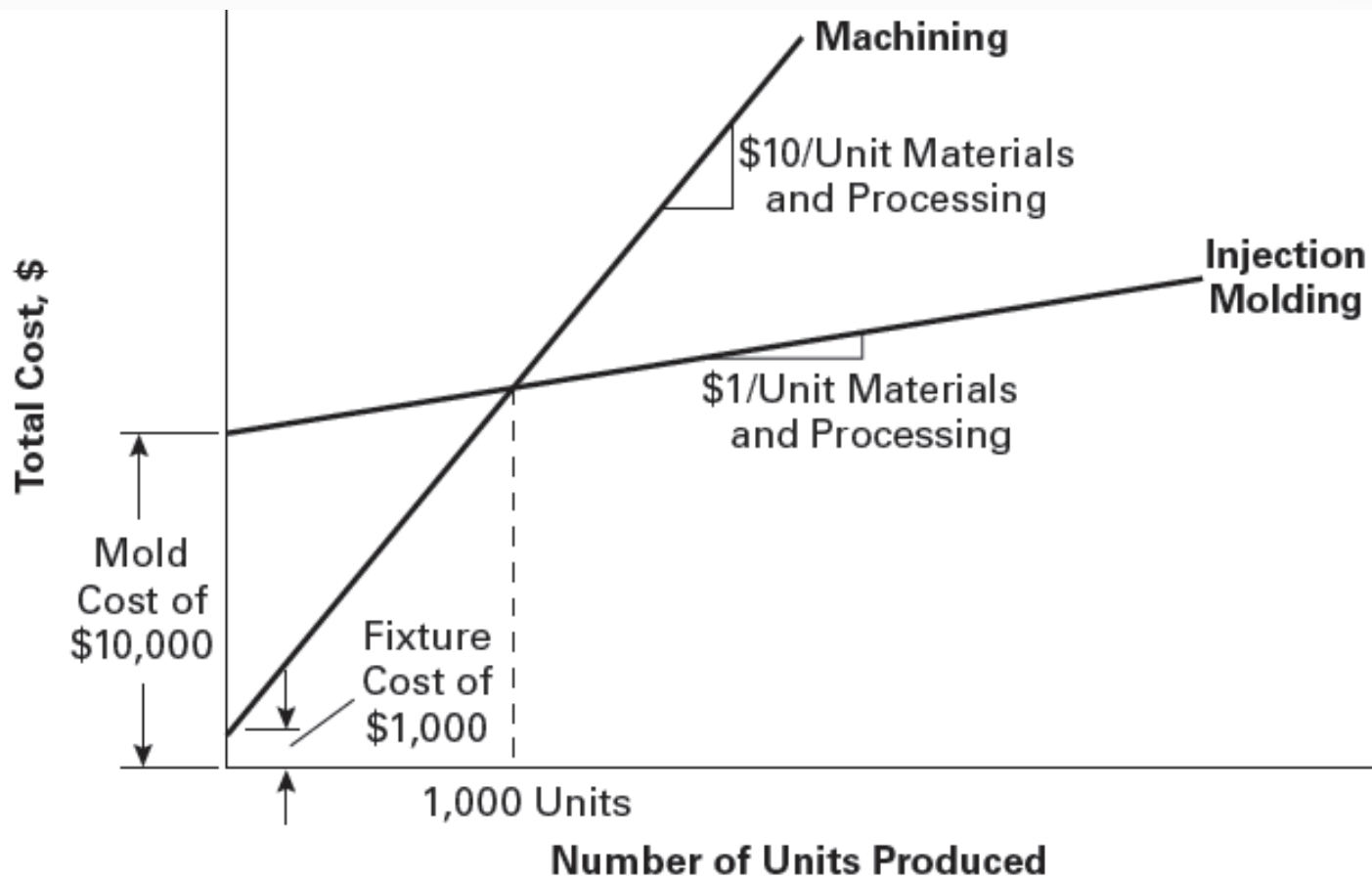
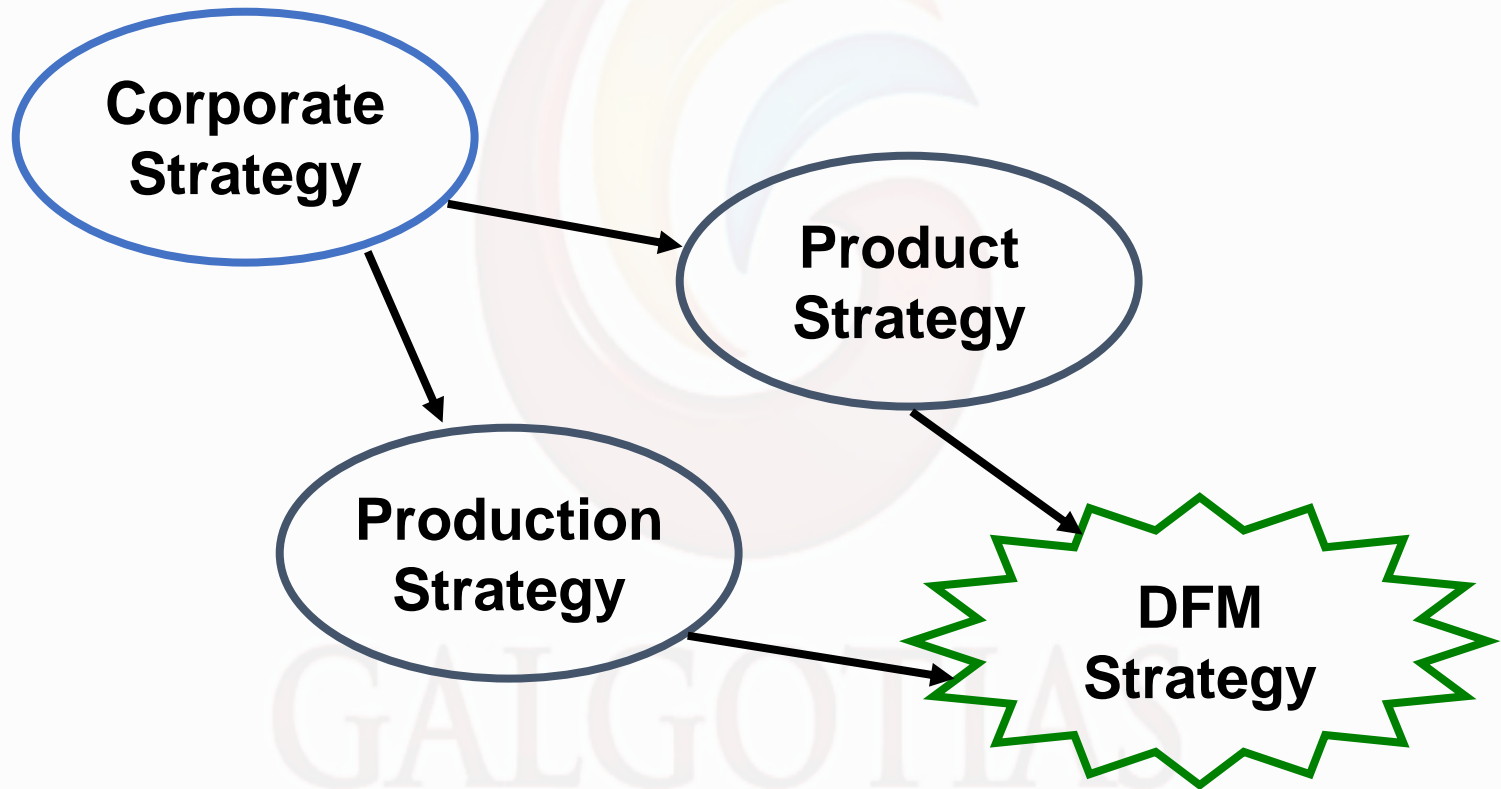


Exhibit 13-10 Total cost of a hypothetical part as a function of the number of units produced for injection molding versus machining

# DFM Strategy is Contingent



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# References

1. Karl T. Ulrich and Steven D. Eppinger (2009), Product Design and Development, 4<sup>th</sup> Edition, Tata McGraw-Hill Publishing Company Limited, ISBN: 978-0-070-14679-2
2. Stephen C. Armstrong (2005), Engineering and Product development Management– The Holostic Approach, Cambridge University Press, ISBN: 978-0-521-01774-9.
3. IbrahimZeid (2006), Mastering CAD/CAM, 2<sup>nd</sup> Edition, Tata McGraw-Hill, ISBN: 978-0-070-63434-3.
4. [Anoop Desai](#), [Anil Mital](#) and [Anand Subramanian](#) (2007), Product Development: A Structured Approach to Consumer Product Development, Design, and Manufacture, 1<sup>st</sup> Edition, Butterworth-Heinemann, ISBN: 978-0-750-68309-8.

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A large, faded logo of Galgotias University is centered in the background. It features a circular emblem with three curved, overlapping bands in shades of yellow, blue, and red, creating a sense of motion or a stylized 'G'.

**Thank you**

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