

# How do COGS Influence Product Pricing?

*Some ideas for discussion*

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# COGS in the Product Life Cycle

## Early development

- Assessing the technical and commercial feasibility of bringing the technology to market

## Commercialization

- Supplier, Manufacturer and Partner negotiations
- Production site choice

## In-market

- Price negotiation by purchasers
- Assessing opportunities for cost reduction
- Market attractiveness understanding

The value and the type of COGS at each stage differs considerably to technical experts. In practice same COGS are often used across the life cycle

# COGS Complexity Spectrum

## Simplistic

- direct material  
+
- direct labor +
- manufacturing overhead
  
- Usually with a predetermined overhead rate (POR)

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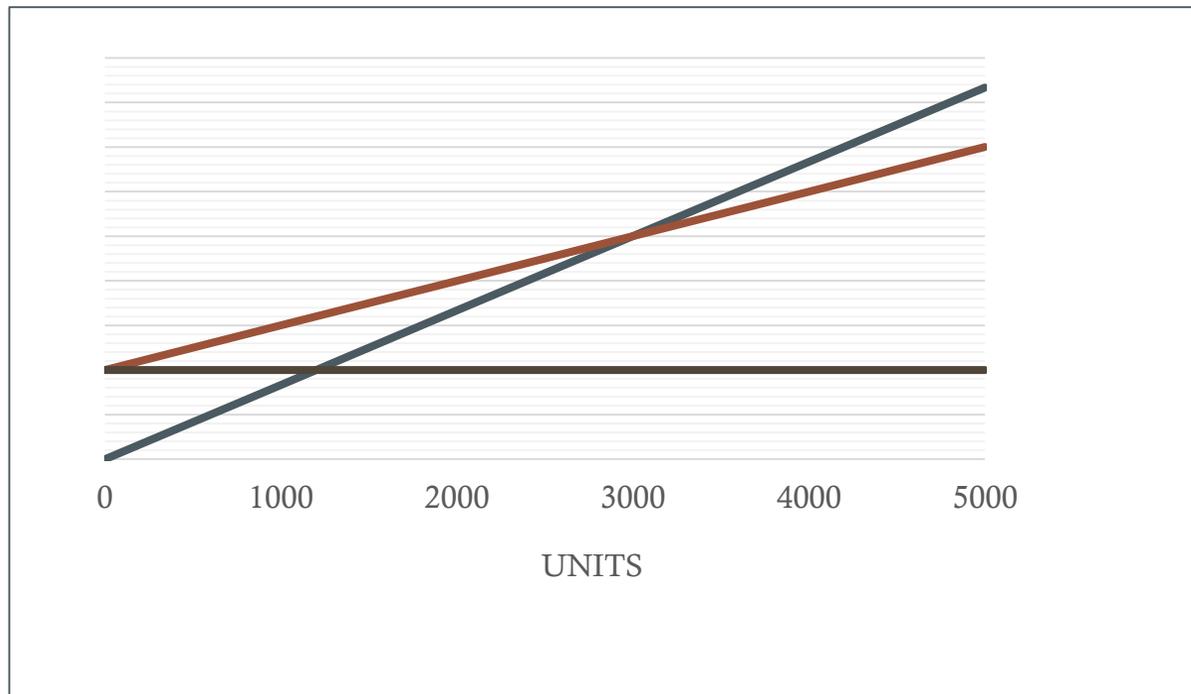
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## Involved

- Detailed overhead allocation
- Full variable costing
- Capital cost and detailed amortization
- Cost-volume relationships

# Basic challenges with over simplistic COGS

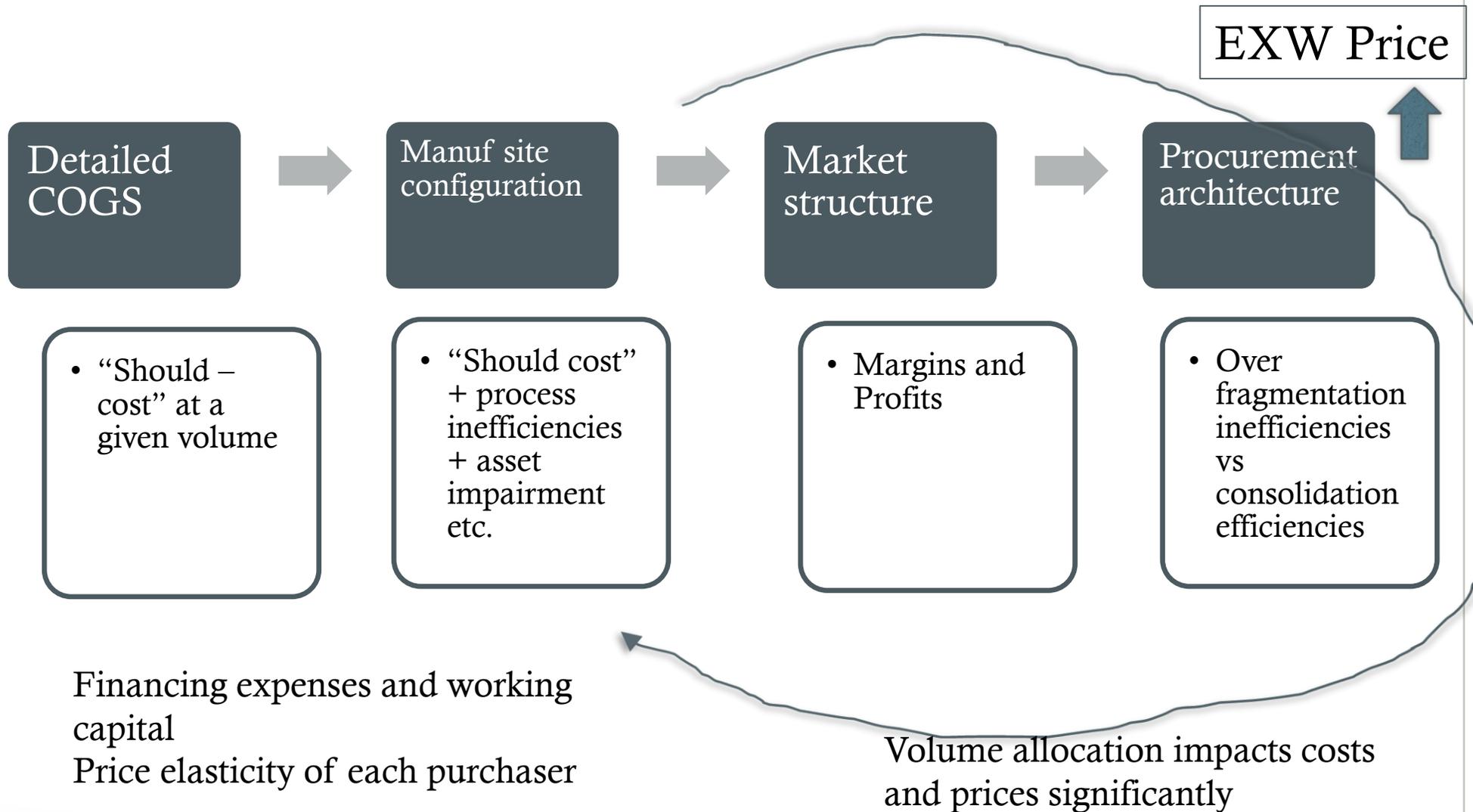
$$(\text{Selling price} \times \text{Quantity sold}) - (\text{Variable unit cost} \times \text{Quantity sold}) - \text{Fixed costs} = \text{Operating income}$$



## Cost volume relationship

- Learning effects
- Economies of Scale
- Allocation of Fixed Costs Overhead

# COGS to EXW Price



# Additional considerations

## **In-market risk premiums**

- Product liability risks + Manufacturing failures

## **Working capital costs are not insignificant**

- COGS that does not include them can create disincentives for inventory and shift to make-to-order production

## **Financing expenses are not insignificant**

- COGS that does not include them can create disincentives for process improvement

# Additional considerations contd.

## **Total Cost of Ownership and not Purchasing Price**

- COGS are intrinsically different between different variants of a technology
- Purchasing price driven volume allocation dilutes incentives for higher COGS technology

## **Price elasticity of purchasing market often determines overhead allocation in multi-product sites**

- We think overhead allocation depends on costing approach used
- In reality inelastic product market receives higher fixed overhead allocation

# Process efficiency and DFM

- Speed and efficiency in manufacturing can significantly reduce COGS
- Design for Manufacturability (DFM)
- Defining target throughput early leads to optimal process development. Regulatory re-filing hurdles limit process change flexibility

# The low demand-low supply endogeneity problem

## The low demand–low supply trap and incentives for process improvement

