

# Optimizing Economic Order Quantity

Total Cost of Ownership approach to optimize transaction cost and inventory

April 2016

# Executive Summary

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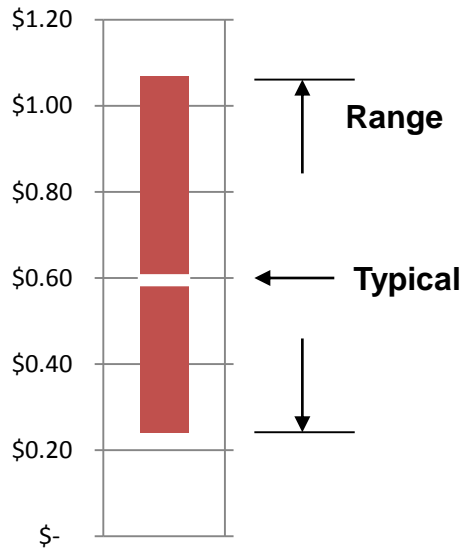
- **Order Release** – Ordering the right amount of raw materials from a supplier is essential to balance improved pricing from economies of scale and limiting inventory on the balance sheet.
- **Order Cost** – Each order has an internal transaction cost for placing the order, receiving shipments, and warehousing.
- **Inventory Costs and Risks** – Carrying inventory increases working capital on the balance sheet as well as the risk due to obsolescence.
- **Total Cost of Ownership** – The Cost & Capital EoQ optimizer tools helps procurement professionals determine the best order release to maximize return on invested capital.

# Drivers of Optimal Order Release

Calculating the proper amount of material depends on the ordering and handling costs, size of the discount, cost of capital, annual consumption and shelf life.

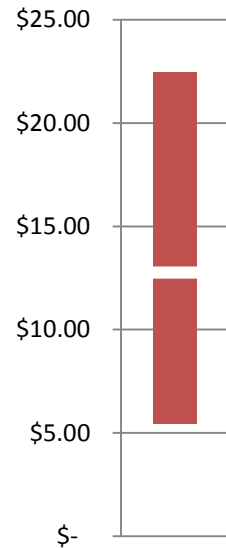
## Industry Benchmarks

### Receiving and Handling



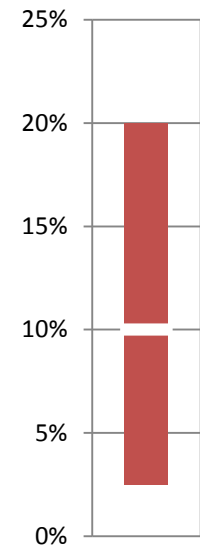
Average internal cost of receiving and handling in a Warehouse / DC

### PO Release



Administrative costs to process an order vary based on automation and footprint

### Cost of Capital



Weighted Average Cost of Capital varies based on ownership, debt and risk

# Order size optimizer tool

Cost & Capital's EoQ optimizer evaluates unit savings and inventory to ensure the order release maximizes shareholder value through return on invested capital.

Annual Usage	60,000
Order Cost	\$ 10.00
Cost of Capital	10%

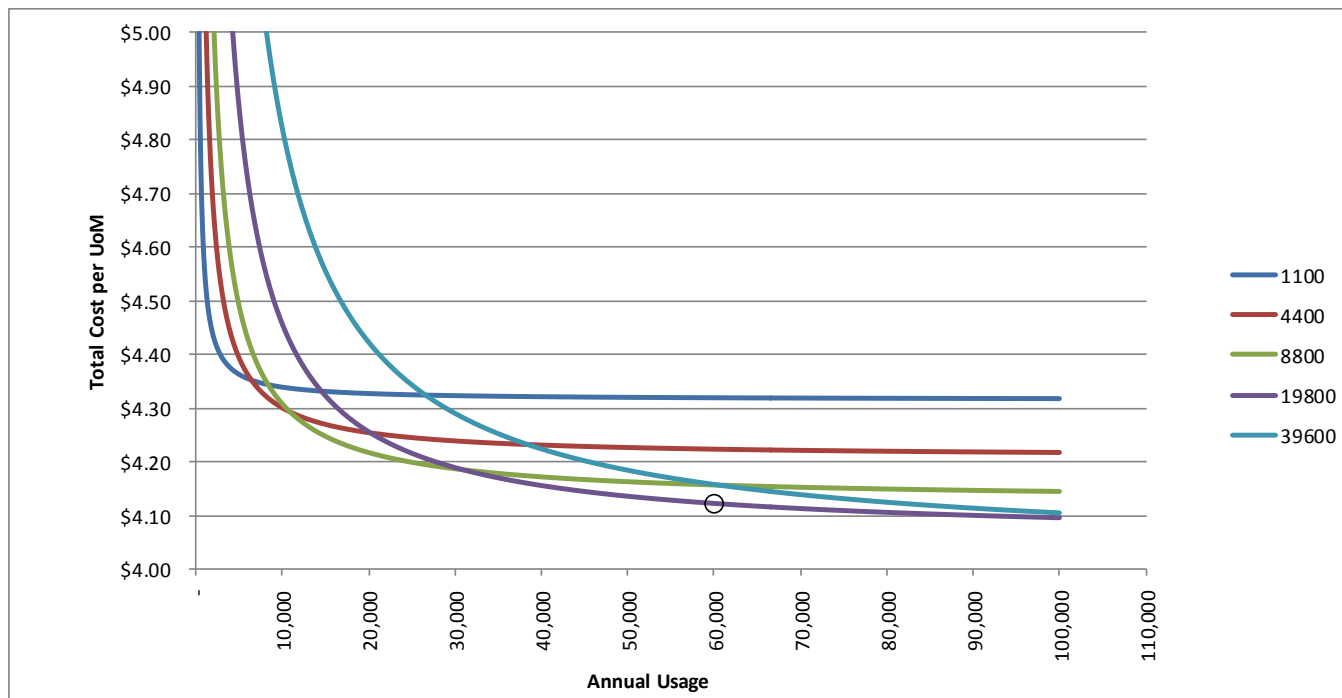
Material	Valox	Supplier	SABIC	UoM	lbs
Order Size	1,100	4,400	8,800	19,800	39,600
Cost per UoM	\$ 4.29	\$ 4.19	\$ 4.11	\$ 4.04	\$ 4.01

Annual Total Cost	\$ 259,169	\$ 253,422	\$ 249,422	\$ 247,360	\$ 249,478
Average Total Cost per UoM	\$ 4.32	\$ 4.22	\$ 4.16	\$ 4.12	\$ 4.16

Input pricing details

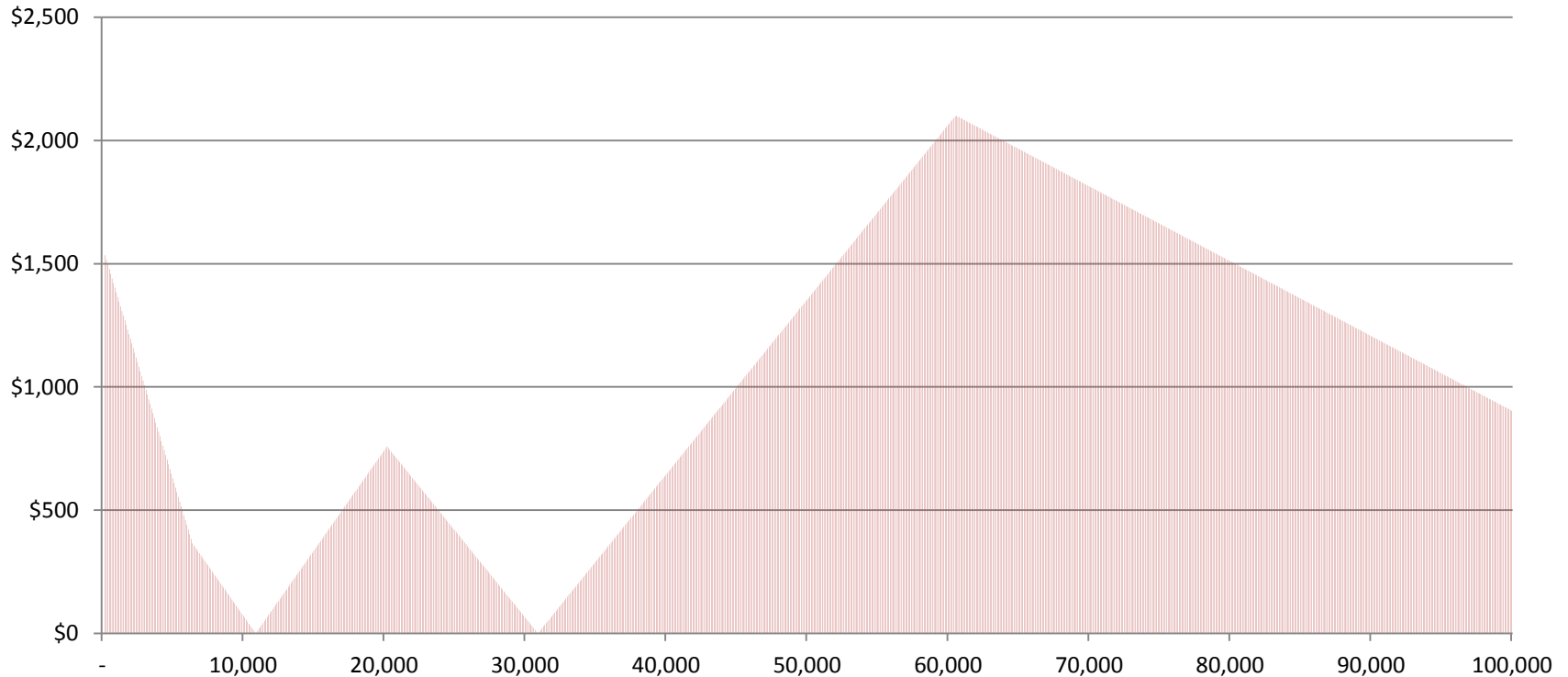
Optimum Order Size

Volume Sensitivity Analysis



# Missed Opportunities

Choosing the wrong order quantity for a single family, grade and adders combination can cost over \$1000 annually—multiply by every SKU.



The risk of incorrect ordering multiplied by every SKU and location can negate any perceived gains in working capital turns.

# Cost & Capital Partners Introduction

- **Cost & Capital Partners focuses on the two most critical levers for shareholder value today - Cost Efficiency and Capital Efficiency**
  - Cash should be treated as the valuable resource it is
  - Spend management preserves cash
  - Capital efficiency frees cash trapped in traditional operations
- **We deliver results – not just recommendations, each and every time**
  - We stand behind our recommendations and prefer to be involved in implementation
  - We conduct negotiations on behalf of our clients
  - We are passionate about our work and the results
  - We work with our clients to implement the changes required to improve the business

## Previous project work



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# Cost & Capital

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