

# ERP Tuning

## INTRODUCTION

ERP systems are the lifeblood of any modern supply chain. They deftly manage all the detailed transactions of business execution. Why, then, such frustration with ERP system performance? Because, alas, the system does just what it is told to do!

ERP implementations must be tailored so business and information processes align. Configure them with proper master data for optimal execution of those business processes.

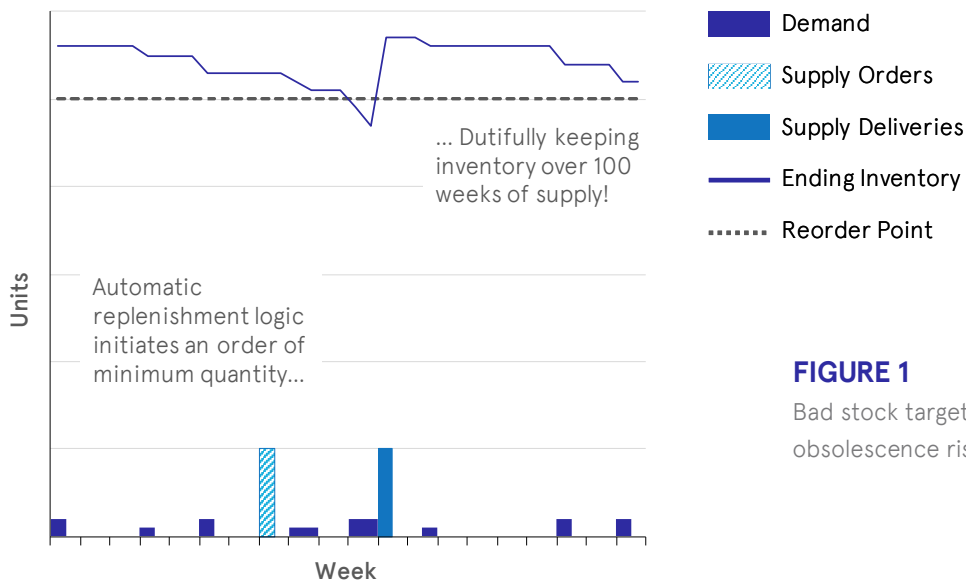
## CASE STUDY

A manufacturer relied on marketing forecasts for products and all their options. Operations set inventory targets and replenishment quantities accordingly.

After extracting relevant transaction data, analysis quickly revealed an expensive option regularly replenished to a level well over a year's supply per recent demand.

Figure 1 shows supply and demand. Obvious on a graph, the problem went unnoticed as demand dropped. It was just one part out of thousands under management, and shortages always got the planners' attention.

This item sorted to the top of the list of obsolescence risk at over \$50,000. The effort exposed the plant's flawed process for maintaining key planning parameters.



**FIGURE 1**  
Bad stock targets can drive obsolescence risk

## MANAGING DATA IN THE REAL WORLD

Organizations often struggle with data stewardship. Improper planning parameters like lead times, lot sizes, and safety stock can lead to painful consequences for service and cost. Moreover, business is dynamic. Values appropriate at product introduction might not make sense at end of life.

Parameter tuning reports can identify targets for updates and corrections. A list of the Top 10 potential problems prioritizes actions for a time-pressed staff.

## ENTER ANALYTICS

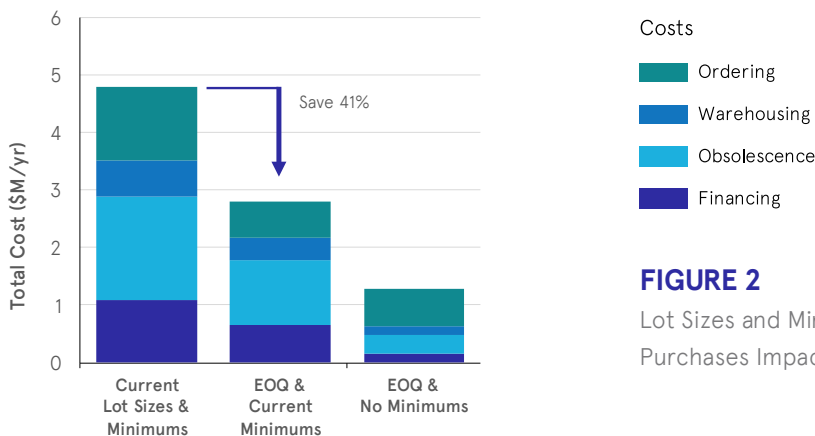
We see four valuable application areas to consider when applying analytics to ERP tuning.

**SETTING VALUES.** Use historical data, along with product & process costs and service targets, to set statistically appropriate values for things like safety stock targets and lot sizes. Don't rely on simple rules of thumb.

**EVALUATING ACCURACY.** Some parameters driving replenishment reflect agreements with suppliers and customers. If real delivery performance doesn't match the quoted lead time in the system, update the system before the gap results in a part shortage.

**IDENTIFYING OPPORTUNITIES.** EOQ logic specifies the "right" amount to order. You can use the results to negotiate. It might make sense, for example, to accept a higher unit cost in exchange for lower minimum order quantities. Turn that idea around, and you can evaluate possible volume discounts. See Figure 2.

**FINDING INCONSISTENCIES.** A part set up incorrectly during an engineering change can cost the organization a lot. In the service parts arena, a repairable item might be wrongly flagged as consumable. Use clues in the data to flag items for further investigation.



Costs

- Ordering
- Warehousing
- Obsolescence
- Financing

### FIGURE 2

Lot Sizes and Minimum Purchases Impact Cost



End-to-End Analytics, LLC  
2595 E. Bayshore Rd.,  
Suite 150.  
Palo Alto, CA 94303

[info@e2eanalytics.com](mailto:info@e2eanalytics.com)