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An Epicor<sup>®</sup> White Paper



# Four Quick Ways To Unlock Hidden Manufacturing Capacity



## Introduction

With the economic upturn, the times of low volume and rationalization are over. Volume is steadily rising for many, and manufacturers are now dealing with a different problem than cost-cutting—how to meet increasing demand after resource cuts and no new investments in productivity improvement in recent years.

With your manufacturing operations already running close to capacity, the traditional ways of gaining new capacity is to make large capital investments, or to outsource some of the new manufacturing demand. These are challenging tactics as getting new resources in line will take time and there's no guarantee that the numbers will continue to climb.

You do, however, have a third option available to you. You can meet the increased demand by freeing up needed resources within your current operations. The key is identifying areas of improvement within your existing operations with real-time manufacturing information and accurate, consistent metrics to make improvements in efficiency.

## The Steps

### Step 1: Reduce downtime losses

In an industry where reliability is key, and downtime hits your bottom line hard, reducing losses can yield great results. In addition to cost savings, reducing downtime leads to proportional increases in manufacturing capacity. Best practices implemented on a single line can be easily transferred to other lines, multiplying the impact and finding even more needed capacity.

Efforts to reduce downtime routinely have a high probability of success. Sometimes it is possible to eliminate an entire loss category with a simple change in work practice. For example, many companies have discovered that it can be very effective to stagger break and lunch intervals; others have eliminated a specific loss category entirely by replacing small parts, or increasing the frequency of routine maintenance.

### Step 2: Reduce minor stops

Minor stops are short-duration hesitations and stops, usually less than five minutes—short enough to be “unnoticed” but long enough to disrupt the business and efficiency. These can add up to significant loss of manufacturing time, especially if you don't have visibility around the number of and reasons for minor stops. If you have the right tools in place, it's reasonable to expect a high level of success when attacking minor stops: 50-75% reduction. However, remain cautious because minor stops can reappear. To sustain gains, world-class manufacturers consistently examine root-cause indicators and continue to make adjustments.

### Step 3: Eliminate production variability and quality loss

Production consistency translates into a more reliable and predictable supply chain, increasing the rate of first time ‘perfect orders’ while cutting time lost due to rework. Stable lines run at higher production rates consistently, resulting in higher volume.

Quality loss and rejected product has a double impact: material and labor. A standard overall equipment effectiveness (OEE) calculation includes a reject as a lost opportunity for production which impacts capacity. Therefore, when calculating OEE, it is important to consider the cost of material and labor. There is no “typical” operation, and the range of quality variation can be 1% to 5% or even as much as 10% of total production.

Consider this: the cost of material can be four times the cost of labor. From a pure cost perspective, a 1% first-pass reject rate translates to 4% loss. You can vary the analysis to reflect production improvement, cost reduction and probability of success.

#### **Step 4: Establish priorities to tackle loss**

It's important to realize that not all downtime is equal. Applying cost information with the same analysis may reveal an entirely different perspective—the cost of downtime. A cost-of-downtime analysis can be used to establish priorities with a financial context. Moreover, a probability of success analysis across loss categories will prepare operations professionals to prioritize efforts, and achieve sustainable improvements.

Operations excellence professionals generally focus on lean practices to establish production priorities. When they consider cost factors as part of the evaluation, they have the ability to focus on those areas that will have the highest impact on the financial performance of the company.

To quantify the financial impact of each category, it is necessary to understand material and labor cost components. Labor-intensive operations have a greater risk of downtime throughout the entire manufacturing process. Meanwhile, operations with high material costs usually experience significant material loss near the end of the production line. Waste and material loss due to rework may be more significant than the cost of labor.

## **Conclusion**

The best and easiest way to find hidden capacity is to examine operations with systems that monitor and analyze manufacturing operations in real-time. These systems provide crucial information to help you find lost capacity, and avoid costly investments for new machinery, additional labor, or contract manufacturing.

## About Epicor

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Contact us for more information on Epicor Products and Services

 +1.888.999.6995  [info@epicor.com](mailto:info@epicor.com)  [www.epicor.com](http://www.epicor.com)

#### Worldwide Headquarters

San Francisco Bay Area  
4120 Dublin Boulevard, Suite 300  
Dublin, CA 94568 USA  
Toll Free: +1.888.448.2636  
Direct: +1.925.361.9900  
Fax: +1.925.361.9999

#### Latin America and Caribbean

Blvd. Antonio L. Rodriguez #1882 Int. 104  
Plaza Central, Col. Santa Maria  
Monterrey, Nuevo Leon, CP 64650  
Mexico  
Phone: +52.81.1551.7100  
Fax: +52.81.1551.7117

#### Europe, Middle East and Africa

No. 1 The Arena  
Downshire Way  
Bracknell, Berkshire RG12 1PU  
United Kingdom  
Phone: +44.1344.468468  
Fax: +44.1344.468010

#### Asia

238A Thomson Road #23-06  
Novena Square Tower A  
Singapore 307684  
Singapore  
Phone: +65.6333.8121  
Fax: +65.6333.8131

#### Australia and New Zealand

Level 34  
101 Miller Street  
North Sydney NSW 2060  
Australia  
Phone: +61.2.9927.6200  
Fax: +61.2.9927.6298

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