



# Top 10 Proven Tips to Maximize Uptime and Boost Performance

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If your company is not yet performing at world-class levels when it comes to packaging then you are not alone—most companies are not. You are probably interested in leaning out your operations, but do not have the budget or time for a full-blown lean implementation.



Doing nothing is not a good option, given the pressures exerted by your own corporate management team to continue boosting profits—in spite of volatile energy costs, higher materials costs, higher labor costs, and any other challenges posed by your particular market. Well, there is no reason you cannot adopt many of the same methods and techniques that world-class companies used to become world-class. And because you aren't taking early-adopter risks, you can bring about similar levels of improvement more quickly and at a much lower cost.

If that sounds too easy, then take a look at the following top ten proven tips, which distill what is working today at companies that are the leaders in terms of Lean Six Sigma implementations, operational excellence, and world-class performance.

## Tip One: Set Overall Improvement Goals

Often, many manufacturers sell themselves short on potential improvement gains. For example, many companies that started their Lean initiatives several years ago continue to achieve significant gains in productivity. Do not cripple your efforts before you even get started by setting less-than-ambitious goals

that will only provide a marginal benefit to the business.

How do you set appropriate goals? Measure current performance — then get out and benchmark against best-in-class and your peers. Many companies have increased the productivity of their lines by 20 percent or more.

ОБЩИЕ УКАЗАНИЯ  
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3. При наладке ог  
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## Tip Two: Review Current KPIs

It is difficult to improve that which cannot be measured accurately. Yet many companies are guilty of producing charts for “historical reasons”, where the data basis is unclear, data accuracy is questionable, and data is charted but not actually used to drive improvement. How many times have we seen the infamous “line efficiency” metric with calculated values exceeding 100 percent? Too many.

This is always a red flag, and likely indicates target values are based on average performance instead of best demonstrated rate or theoretical rates. Critical to

any productivity improvement initiative are a relatively small number of Key Performance Indicators (KPIs) that can be measured accurately, easily understood, and directly aligned with your greater business objectives.

Has your company clearly defined these key metrics in a document so everyone has a common understanding of how they should be measured? How accurate is the raw data? What is excluded? Have theoretical rates been determined properly? These types of questions will ensure you are using metrics that matter.

## Tip Three: Implement OEE

Overall Equipment Effectiveness (OEE) is a worthy standard for driving productivity improvement. Defined as the product of availability, performance, and quality, OEE breaks your losses into three easily understandable components—each of which requires different types of solutions to improve. Unlike the traditional plant efficiency metric which often is designed around typical output, OEE is designed to show all the key losses that could be improved upon to boost productivity and capacity.

## Tip Four: Set Line-Specific Improvement Objectives

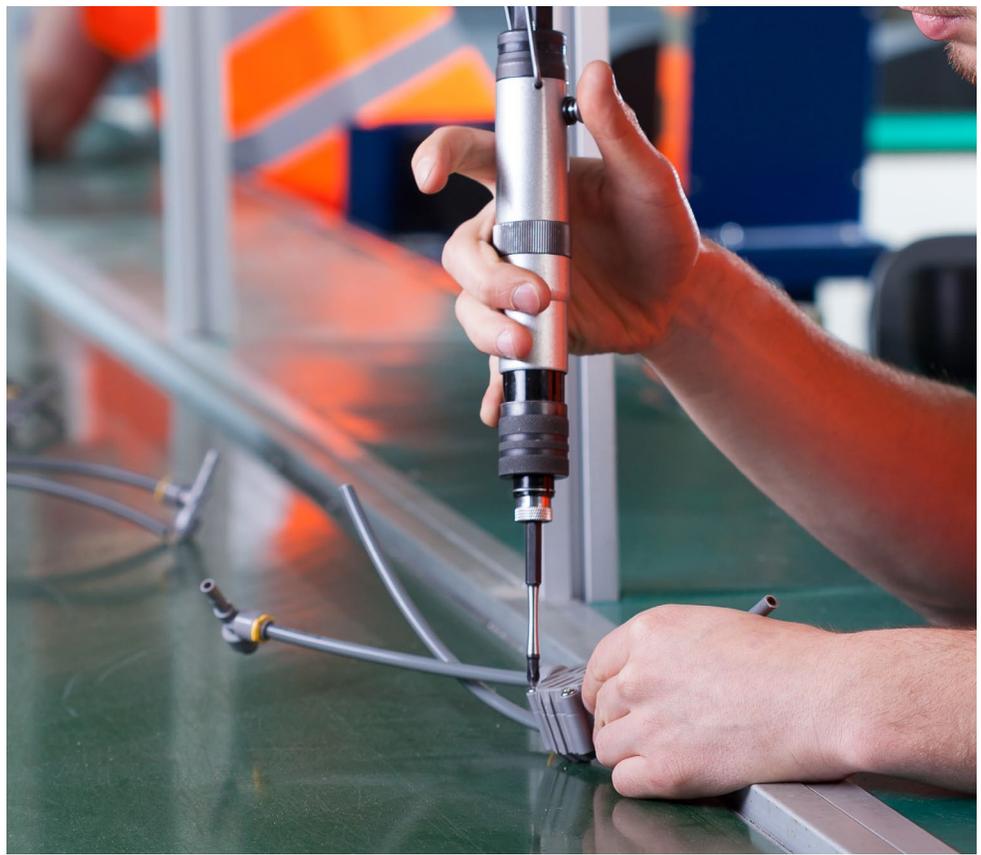
World-Class OEE for discrete operations such as packaging is defined as:

Key Indicator	World Class
Availability	90.00%
Performance	90.00%
Quality	99.90%
OEE	85.00%

Some lines and operations in your plant might be running at far less than world-class OEE. Many food and beverage operations that begin an OEE initiative are starting in the 40th to 50th percentile range. No matter what is your starting point, OEE improvement targets should be specific by line or operation, and should include separate improvement targets for availability, performance, and quality, as shown in the following example:

Timeline	Availability	Performance	Quality	OEE
Current State	60.00%	75.00%	98.00%	44.00%
Year-End Target	75.00%	80.00%	98.10%	59.00%
Gain (Points)	15	5	0.1	15





**Many tools from Lean Six Sigma are being applied successfully to improve the availability, performance, and quality of production operations, including SMED, 5S and Theory of Constraints.**

## Tip Five: Gain Managements Commitment

To reap big benefits—and most plants should be aiming for a multimillion dollar gain—you will need to get the management team on board. Their help will be needed to support organizational culture changes, to provide funding, to provide reward systems, and to keep the organization focused on the effort in spite of all the other priorities competing for their time.

Management also must accept the notion of exposing the plant's weaknesses so those weaknesses can be understood and improvements can be made.

Once management sees how OEE improvement relates directly to the overall business objectives and what a significant financial impact it can have, they will sponsor the

initiative. Take the example of a frozen foods company with net sales of \$156 million and operating at a baseline OEE of 50 percent. Because OEE is proportional to output, if the company increases its OEE by just 5 points, its net sales capability will increase by 10 percent, or \$15.6 million.

If the company has demand for the additional product, based on a 78 percent cost of products sold, then this will boost profits by 68 percent. If the demand isn't there, then the plant can cut back on the amount of overtime or number of shifts to achieve a hard dollar savings.





## Tip Six: Automate KPI Data Collection

If you don't know about it, you can't fix it. Many plants are stymied by a lack of accurate information that would allow them to understand why they are stuck at current productivity levels. Or there are so many opportunities it is difficult to know what problems to attack first.

Fortunately, real-time performance management software is now available that allows companies to automatically collect accurate, real-time performance data from various sources. This allows complete characterization of line performance through continuous tracking of OEE and other KPIs in real-time, and the relation of these to every equipment failure—including frustrating short stops that might just be a few seconds in duration.

## Tip 7: Implement a Role-Based Web Dashboard

Once you have automated data collection, you need a simple real-time method to share that information with everyone in the plant who is involved in the improvement effort. Look for RPM systems, such as TrakSYS™ from Parsec Automation Corp., that provide a role-based Web dashboard as seen in Figure 1, which offers extraordinarily quick and easy access to reports relating to each person's specific job function.

Reports should provide one-click drill down so users can intuitively dig more deeply into an area of interest without having to navigate through a complex menu structure.

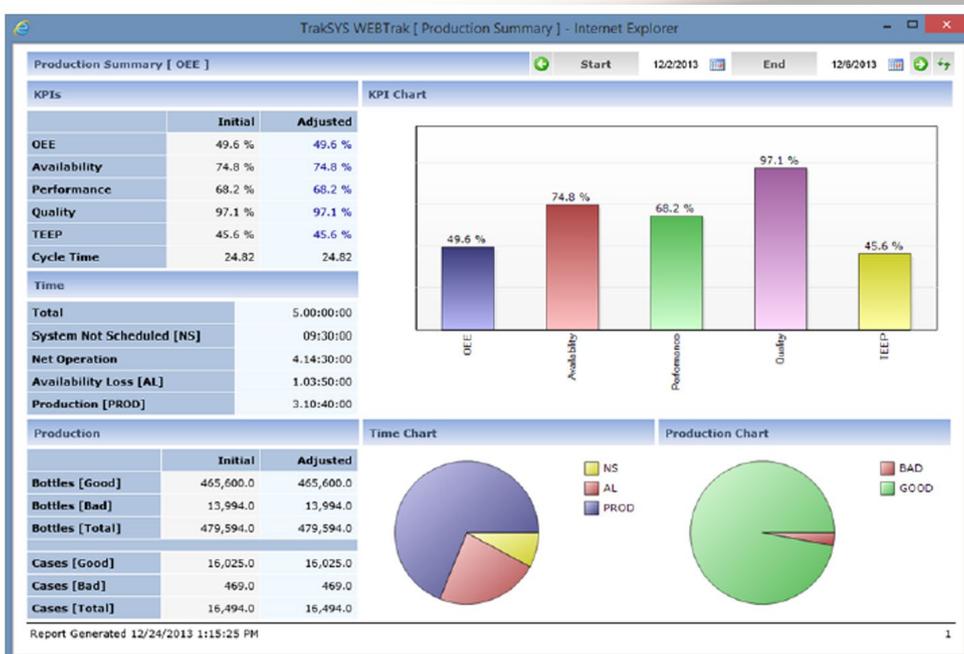
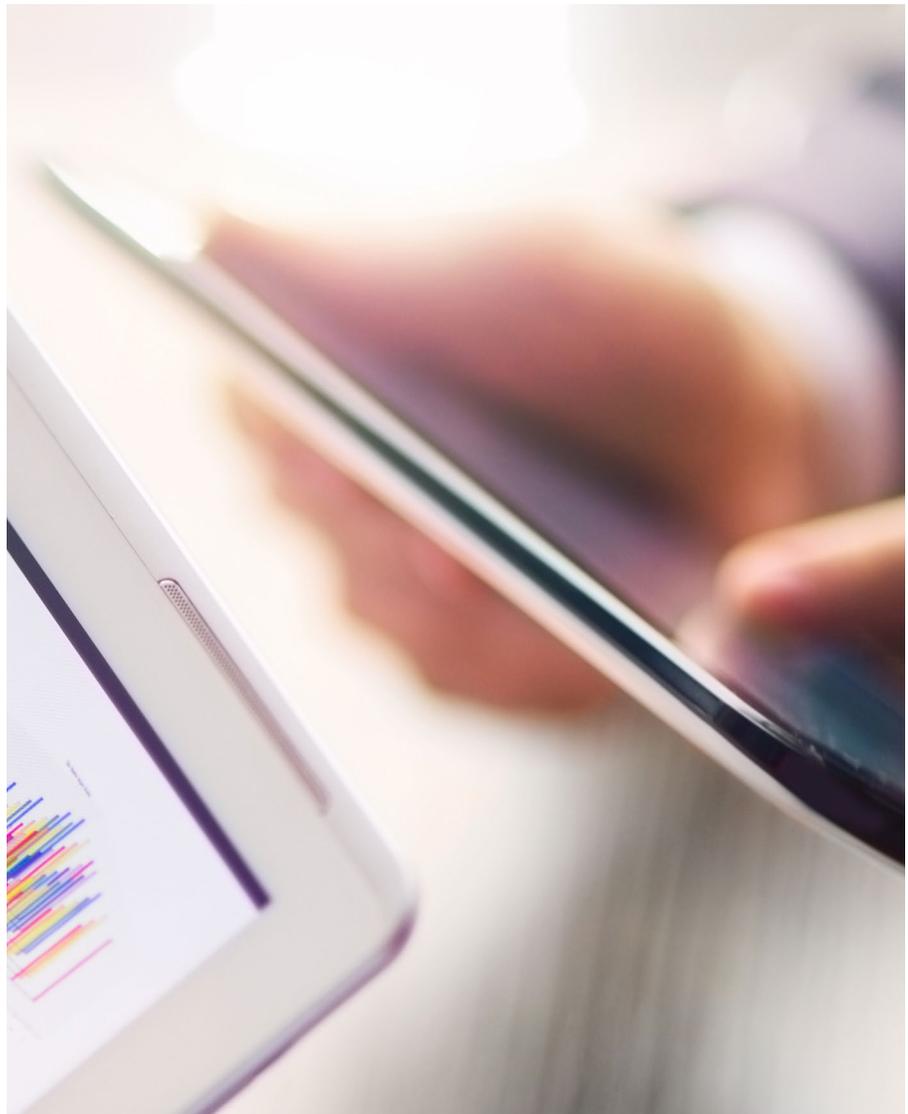


Figure 1 — TrakSYS™ Web Reporting Portal Allows Role-Based Reports of Key Performance Indicators

## Tip Eight: Perform Ongoing Analysis

Imagine playing a soccer game, but in this variant of soccer, scoring is so complex the referees do not announce the score until the game is over. This is the way many manufacturing plants operate today.

It is critical to get the plant floor associates and technicians directly involved in the productivity improvement efforts. One way to do this is with a plant floor client application that provides the operators with the real-time “score” as they are running. This application also can be used to collect additional information from operators related to running the lines; for example, when operators stop the line for a changeover or sanitation.



## Tip Nine: Identify Champions and Key Improvement Techniques

How many times does an initiative fizzle because the company cannot maintain focus? It is recommended that companies give one or more champions the responsibility for running the improvement program, and educating the plant team so that everyone understands the objectives and the tools provided to reach the goals.

Many tools from Lean Six Sigma are being applied successfully to improve the availability, performance, and quality of production operations. Examples include SMED and 5S for changeover time reduction, Theory of Constraints to ensure a focus on improving operations that will generate a positive impact, and processes such as DMAIC and 5 Why to analyze problems and develop solutions.





**Creating a complete solution for maintenance should include a technology platform that can automate order generation, display SOP documents, and provide web-based visualization.**

## Tip Ten: Share Success

The most successful improvement initiatives have a broad foundation. Involve the entire plant team by soliciting ideas for process and procedural improvements (in some plants, “waiting” is the number one cause of downtime) and have a multi-disciplinary team review and respond to every suggestion from the plant floor.

Implement the best ideas and publicize the successes. Provide a rewards system that acknowledges the contributions of individuals, as well as line teams that succeed in reaching their improvement goals. Recognition and rewards can help transform the plant floor culture to one that is truly high performing.



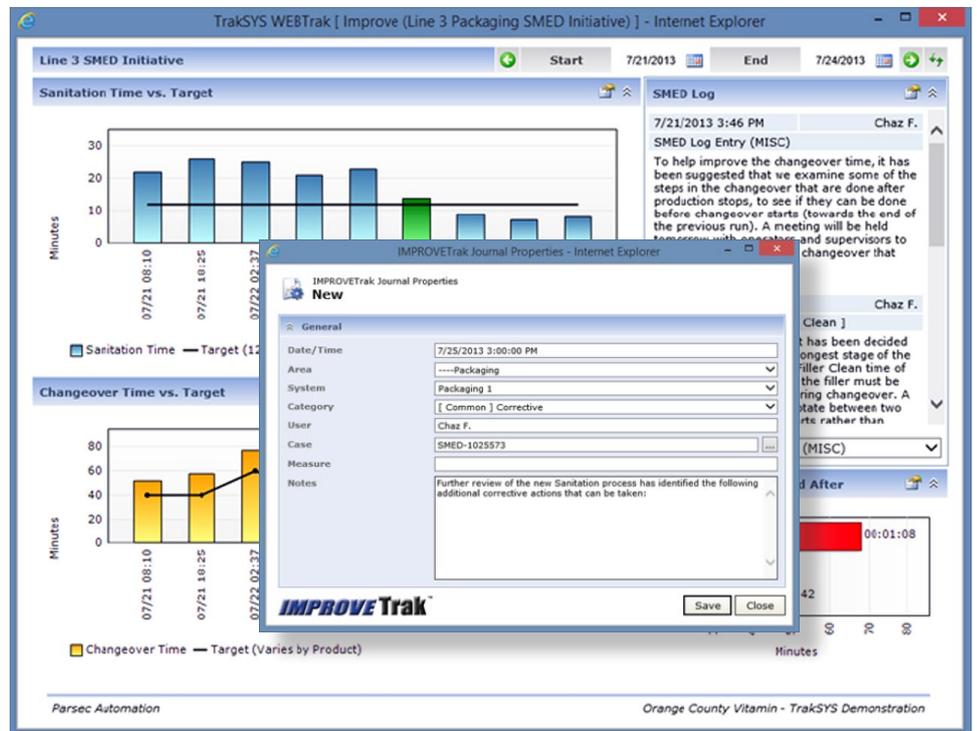


Figure 2 — TrakSYS™ Provides Analytics and Tools That Enable Champions to Drive Continuous Improvement

## Going Forward

These 10 tips have all been successfully applied in many manufacturing plants and work best when they are all used as part of a comprehensive improvement program.

Do not be one of the many manufacturing operations teams that are “too busy” to achieve real improvement. It takes a significant effort to break out of the “postmortem data analysis” mode of operation and begin a journey toward continuous structured improvement. This journey will provide many rewards—financial and personal—for those who choose to follow this path.





## About Parsec

Parsec is the developer of TrakSYS™, a proven operations management software application and solution platform designed to significantly improve manufacturing processes. Parsec is committed to providing best-in-class products and solutions to our worldwide community of clients to assist them in optimizing their manufacturing operations. There are thousands of TrakSYS™ licenses in use around the globe in a wide variety of Industries.

TrakSYS™ helps manufacturers to maximize asset utilization and efficiency, increase capacity with no new capital equipment, reduce production costs, decrease lead time, and improve profitability. For more information about Parsec and TrakSYS™ please visit the corporate website at [www.parsec-corp.com](http://www.parsec-corp.com).

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