

5 Reasons Your ERP Needs A Nesting Interface

By Silas Fulsom
Custom Development Team
Global Shop Solutions



In today's highly competitive global markets, lean manufacturing is no longer a nice-to-have – it's a way of life.

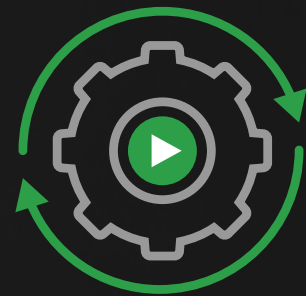
YOU EITHER REDUCE COSTS, SIMPLIFY OPERATIONS AND IMPROVE PRODUCTIVITY ON A CONTINUAL BASIS, OR YOU LOSE BUSINESS TO COMPETITORS THAT DO.

Lean manufacturing starts with having an [integrated ERP system](#) to manage the business from quote to cash, including purchasing raw materials, scheduling jobs, tracking costs, shipping product on time and invoicing customers. The best ERP systems are flexible and customizable enabling you to use third-party software integrations to support lean manufacturing efforts.

Take [nesting software](#), which automatically and efficiently arranges individual part shapes on sheets or plates of stock material in a way that produces the least amount of waste. Manufacturers save time and labor costs by eliminating the manual process of determining which parts to cut on an individual sheet of metal. And they reduce purchasing costs by minimizing wasted material.

Nesting software provides a measurable improvement over the old manual process. However, it has one major limitation – it can't talk to your ERP system. This requires both systems to work independently of each other, so you still end up with inefficiency built into the process.

For example, issuing cut material to a job requires creating a work order in your ERP system, re-entering the data in the nesting software, printing the nesting report, and then going back into your ERP system to issue the material based on the nesting report. All of which takes time, adds to labor costs, and leads to the human error that inevitably occurs with manual data entry.



**THERE'S A BETTER WAY
- USING A NESTING
INTERFACE THAT RESIDES
IN YOUR ERP SOFTWARE
TO AUTOMATE THE
PROCESS.**



Integrate Your Shop Floor Cutting Process

A nesting interface is a plugin offered by many ERP providers, including Global Shop Solutions, which integrates with your shop floor cutting process by allowing your ERP system and nesting software to share data with each other.

Your ERP system sends work orders, inventory information, workcenter details, and other data to your nesting software. Your nesting software uses this data to optimize material usage and the cut patterns for individual sheets of material.

Then it sends data back to your ERP system, including cutlist details, material drops, scrap, and estimates for routing and work orders.

Instead of going back and forth between each software to manually re-enter the data, the entire process is simplified and synchronized, providing multiple opportunities for time savings and process improvement. Automating the exchange of data also frees up your employees to focus on producing a quality product on time.

SAVE TIME AND MONEY, SIMPLIFY PRODUCTION

NESTING SOFTWARE PACKAGES LIKE PRONEST AND SIGMANEST® ENABLE MANUFACTURERS TO DRAMATICALLY IMPROVE MATERIAL UTILIZATION AND REDUCE WASTE. INTEGRATING YOUR NESTING PROGRAM WITH YOUR ERP SOFTWARE TAKES LEAN MANUFACTURING TO THE NEXT LEVEL BY OFFERING FIVE KEY BENEFITS.

1 Tighter Inventory Control.

Nesting software can optimize your material usage and reduce scrap, but it can't determine how much material you have in inventory and how much of it is available for any given job. With an ERP nesting interface you can do both.

Your ERP inventory management module tells the nesting software exactly what you have in inventory, down to the exact size and shape. Your nesting software can then identify the best piece to cut that will produce the least amount of scrap.

Upon completion of the cutting process, the nesting software communicates the material drops that need to go back in inventory or can be utilized for upcoming work orders. The result is a seamless exchange of data between the two programs that keeps your inventory figures up to date while ensuring the most efficient use of materials.

Many manufacturers also have a "bone yard," an area out back or in some remote corner of the warehouse where material remnants often sit unused until they are eventually scrapped. With a nesting interface, your ERP inventory module can automatically notify the nesting software of these materials, turning them into highly managed and tracked extensions of your regular inventory. You make full use of all your inventory and reduce costs by eliminating unnecessary material purchases.



**YOUR ERP INVENTORY
MANAGEMENT MODULE
TELLS THE NESTING
SOFTWARE EXACTLY WHAT
YOU HAVE IN INVENTORY.**

2 Improved Waste Management.

It wasn't too long ago that wasted material was considered just another business expense. Simply total up the costs and add them to the price of the job. Problem is, today's customers are no longer willing to pay for waste. They want the lowest possible cost and consider wasted material to be your problem, not theirs.

Even with nesting software, it can be difficult to utilize an entire piece of material, especially when grouping different jobs on the same piece. However, integrating the nesting software with your ERP system can significantly improve usage of leftover material by automatically creating and receiving material drops.

Suppose you need to cut a 3' x 5' piece from an 8' x 10' piece of material. Using the cut details data from the nesting software, your ERP system will assign a new part number to the cut piece, providing a permanent record of when you created it and what part number it came from. The ERP software will also create a new part number for the drop and record the quantity. It's all done automatically, and it all comes from the ability for ERP and nesting software to communicate with each other.



**TODAY'S CUSTOMERS ARE
NO LONGER WILLING TO
PAY FOR WASTE.**

3 More Accurate Estimating.

Leaning operations requires minimizing downtime as much as possible. A nesting interface lets you get jobs to the floor faster by electronically inserting them into flexible schedules or cultists.

A scan of a barcode or the push of a button is all it takes to get employees working on the job.

Linking your nesting data to machine and employee capabilities in your ERP system also enables more efficient production scheduling. This, in turn, allows you to estimate jobs with greater precision because you know how long each job will take and how much it will cost.

Here's how that works: routers created in your ERP system act like templates for your work orders. As the nesting software sends over its reports, your ERP system builds a historical database of actual versus estimated material use. Using summary reports containing this data, you can adjust every router that uses a specific sequence based on whether you are over or under estimates. From that point on, all new work orders will have the updated estimate without having to manually enter the data.



**ESTIMATE JOBS WITH
GREATER PRECISION
BECAUSE YOU KNOW HOW
LONG EACH JOB WILL TAKE.**



4 Optimized Time and Material Utilization.

One of the biggest advantages of nesting software is the ability to group parts from different jobs onto the same piece of material.

However, without a nesting interface, it takes time and effort to make sure the cut parts get issued to the proper job. With an ERP nesting interface, this time-consuming task happens automatically.

Integrating your ERP cutlist application with your nesting software also tells you the number of work orders currently in the queue that can fit on your current piece of material from inventory. This saves time and money by allowing shop floor employees to clock in to a single cutlist instead of multiple work orders. The nesting interface also communicates the amount of time required to complete projects to your ERP software, making it easier to update estimates.

5 Reduced Costs and Errors.

An ERP nesting interface saves you money. Period.

Without a nesting interface integrating with your ERP software, a manufacturer must commit man hours to an individual (or multiple individuals) to type in data to both your ERP software and your nesting software.

An individual must spend time entering the inventory data into the nesting application and the nesting information into your ERP software. It's can be a time consuming process and ripe with opportunity for error.

When you utilize an ERP nesting interface, your workforce's time is spent working on higher value items that affect your bottom line. Your ERP system and nesting software speak to each other, reducing the opportunity for error and saving you time and money. Employees spend less time clocking on and off work orders or entering data into multiple systems and more time machining the parts. All of which adds up to a more efficient and productive workforce that spends more time doing what you pay them to do and less time getting ready to do it.



YOUR ERP SYSTEM AND NESTING SOFTWARE SPEAK TO EACH OTHER, REDUCING THE OPPORTUNITY FOR ERROR AND SAVING YOU TIME AND MONEY.

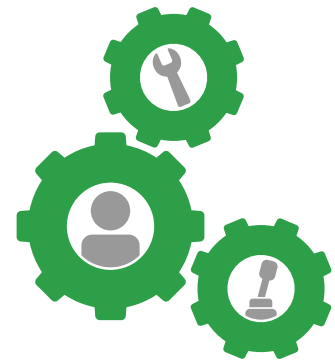
Nesting Interface “Need To Knows”

Currently, there are several good nesting software packages on the market and a number of ERP products that offer a nesting interface. However, it's important to understand that not only is every nesting software different, even the same nesting product can have different options and configurations based on the type of product(s) you make.

As a result, there is no such thing as a one-size-fits-all nesting software. Which means your ERP provider must offer a customized interface (plugin) that works with your nesting software. Otherwise the two systems won't be able to communicate with each other.

IF YOU'RE CONSIDERING INSTALLING A NESTING INTERFACE, KEEP THE FOLLOWING IN MIND:

- **IMPLEMENTATION.** Downloading and installing nesting interface software is a relatively simple process, especially if your ERP vendor has already built a plug-in for your specific nesting software. If not, they will have to build one before you can implement it. Global Shop Solutions has already built plugins for some of the most popular nesting products. However, if the nesting software provider has made some tweaks for the customer, we often need to adapt our plugin to integrate with them. Either way, we have found that the best approach involves treating every nesting interface installation as a custom project to ensure we get it right for the customer.
- **CHOOSING A NESTING SOFTWARE.** If you don't already have a nesting software, conduct plenty of due diligence to make sure you get the right one for your type of business. Learn how to use it and make sure it works well in your environment before adding the nesting interface into the mix.



**LEANING YOUR
MANUFACTURING
OPERATIONS REQUIRES
SEAMLESS COORDINATION
BETWEEN YOUR EMPLOYEES,
TOOLS, AND MACHINES.**

Leaning your manufacturing operations requires seamless coordination between your employees, tools, and machines – including your software programs. Interfacing your ERP system and nesting package will enhance the functionality of both software while enabling everyone on the shop floor to work together more efficiently as a team.



ABOUT THE AUTHOR

Silas Fulsom, Team Lead for Global Shop Solutions' Custom Development Team, works with customers to develop custom applications and reports that help simplify their manufacturing business on a day-to-day basis.

To learn more about the 5 reasons your ERP needs a nesting interface, call 1.800.364.5958 or visit www.globalshopsolutions.com.