What Manufacturing Looks Like With (and Without) ERP Software

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ERP SOFTWARE
We simplify your manufacturing.™

If someone took a photo of the health of your manufacturing business, would it look like a "before" or "after" photo?

You've seen these kinds of pictures in weight-loss advertisements. In the before photo, an obviously overweight person looks tired, flabby, and woefully out of shape. In the after photo, the person exudes the model of good health – lean, fit, and full of energy. In the manufacturing industry, companies without ERP generally look like the before photo. Those that use ERP to run the business typically look like the after photo.

HOW DOES ERP TURN AN OVERWEIGHT, INEFFICIENT MANUFACTURING BUSINESS INTO A LEAN, FIT AND SUPERCHARGED MANUFACTURING MACHINE?

Simply put, ERP provides a complete solution for what ails your manufacturing business. Created to efficiently run the entire organization from quote to cash, it touches all critical aspects of the business, allowing you to manage everything from one central location.

The power of ERP lies in its ability to provide the data you need to make smart decisions for your business. When you know what's happening in every corner of your shop, everything gets better. People and processes become more efficient and productive. Communication between departments improves. Costs and waste go down while sales, margins and product quality go up. You can promise due dates to customers with confidence. On-time delivery becomes a way of life.

At Global Shop Solutions, our motto is " your ERP software helps you deliver a quality product on time every time." Our goal is for Global Shop Solutions ERP software to become the most valuable asset at your business. This short video clip provides a brief introduction to how can ERP help you attain that goal.

Manufacturing Before ERP

Manufacturing without ERP generally looks like a mess. Some of the top signs of an unhealthy manufacturing business include:

DATA CAN'T BE TRUSTED.

Manufacturing companies without ERP generally use volumes of paper documents and spreadsheets to manage production. What software they do use consists of disparate programs that can't communicate with each other. This creates a system rife with manual errors, and inaccurate, outdated information. When you can't trust the data guesswork prevails, and often leads to low quality decisions.

HIT OR MISS SCHEDULING.

With no true accounting of labor and machine capacity, rough estimations drive the scheduling process. Manual scheduling can take days to complete. Making changes to jobs in progress becomes a nightmare of complexity and uncertainty. All of which result in missed due dates and dissatisfied customers. It's no wonder many manufacturers rank scheduling as the most stressful job in the business.

INACCURATE JOB COSTING.

Few manufacturing tasks are more important than precise job costing. Without ERP, few tasks are more difficult. Manual time sheets often contain errors. Incorrect inventory counts make it hard to identify true material costs. Lack of real-time data makes job costing historical rather than current. Estimating and quoting frequently miss the mark due to imprecise and unreliable data. Not a good recipe for knowing your true costs.

INCORRECT WORK ORDERS AND ROUTERS.

In a "before" ERP environment, work order and routing information often consists of tribal knowledge that resides in the heads of a few people. Jobs often start late because the work orders and routers don't get to the shop floor on time. Large, complex work orders can take days or weeks to construct. Human error causes shop floor mistakes that lead to costly rework and missed due dates.

POOR INVENTORY MANAGEMENT.

Manual inventory management creates a drag on virtually every aspect of production. Parts and materials get lost or misplaced. Purchasing often buys too much or too little due to imprecise inventory data. Poorly designed number structures can result in duplicate inventory. Material shortages cause jobs to start late and lead to expedited shipping costs. Inventory carrying costs go up, on-time delivery goes down, and nobody is happy about it.

INEFFICIENT MATERIAL MOVEMENT.

Inaccurate inventory is a major cause of shop floor bottlenecks. Manually tracking material movements with handwritten bin cards makes getting the right parts to the right jobs even more difficult. Bin cards get lost. Material movers sometimes forget to record their transactions. Incorrect part numbers deliver the wrong part to the job. Inventory counts for a part or material may not get updated for days after a transaction.

EXCESS PURCHASING COSTS.

When the purchasing function can't communicate with inventory, buyers often don't know when to order parts, how many, or how much to pay. Incorrect inventory counts can cause overbuying to avoid potential part stockouts. Researching vendors for the best price and delivery times can take hours. Purchasing inefficiencies cause material costs to go up while inventory accuracy goes down.

FINANCIAL DISCONNECT.

When the finance function doesn't reside in an ERP system, it must produce the financial reporting with a different system – a slow, cumbersome, and inefficient process. The lack of integration with production makes the data historical rather than real-time. The numbers become out of date as soon as the next transaction occurs. Manual data entry inevitably results in human error and can take days or weeks to close the books at the end of the month.

LOW PRODUCT QUALITY.

Without ERP, quality control is a historical rather than in-the-moment process. Incorrect part numbers on work orders or routers can result in production errors. Manual scrap counts tend to be unreliable. Jobs often continue after engineers issue a stop order because some people don't receive the notification. All of which leads to rework, increased job costs, and dissatisfied customers.

DOUBLE DATA ENTRY.

Without ERP, customer specs, drawings, engineering documents, bills of materials (BOMs) and other job data typically require double manual entry – once by the customer and once on your end. This time-consuming process invites human error that increases labor costs and leads to mistakes on the job. The inability to integrate with CAD/CAM, nesting, and other software programs increases the time and cost required to set up and complete jobs.

With a reliable ERP software, none of the above need to happen in your business.

Manufacturing After ERP

What does the after ERP photo look like? Generally speaking, companies that implement or convert to an ERP system with a reputation for quality and service will experience many of the following improvements.

ONE SOURCE OF TRUTH.

Imagine being able to trust the data you collect. Not just some of it, but all of it – including production schedules and promised due dates. ERP makes it happen by tracking, organizing and providing quick access to information you can count on to be accurate and up to date. Manual spreadsheets, redundant processes, and stand-alone silos of information disappear as you discover what your business can achieve with data you can trust.

FULLY INTEGRATED SCHEDULING.

The toughest job in the plant becomes far less stressful with ERP. Instantly identify your true labor and resource capacities. Engage in "what-if" scenario planning to see how potential schedule changes will affect other jobs. Use finite and infinite scheduling to make long-term scheduling decisions. When you get the schedule right, shop floor personnel always know what to be working on now and what to work on next.

PRECISE JOB COSTING.
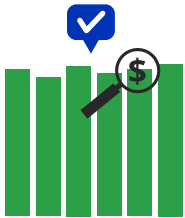
ERP gives you certainty in your job costing by providing detailed cost breakdowns for inventory, jobs sequences and cost of goods sold. It tracks every cost that goes into a project – from labor and parts to setup times, tool and equipment usage, indirect labor, outside work, and more – with remarkable precision. Estimate and quoting become more accurate. Cost overruns are easy to spot. Comparing actual to estimate becomes a powerful tool for identifying problems and areas for improvement. When a job is finished you know the total cost down to the penny.

ACCURATE WORK ORDERS AND ROUTERS.

Work orders act as the architectural blueprint for each job; routers provide the road map to get there. ERP electronically sends these critical documents to the shop floor, ensuring the correct versions get there on time, every time. Large, complex routers and BOMs can be built in a few hours rather than days or weeks. Work orders and routers become trusted tools that speed the production process rather than causing bottlenecks.

DIGITAL INVENTORY MANAGEMENT.

Accurate inventory injects a new level of speed and efficiency into the entire production process. With a few clicks of a mouse you can see how much of a part or material you have on hand, where it is, how much is already allocated to jobs, and when ordered parts will arrive. In short, everything you need to know to accept a due date or get a job started on time. Cycle times become simple to track. Physical counts often take hours rather than days or weeks. Inventory stockouts become a thing of the past.

MOBILE MATERIAL MOVEMENT.

ERP transforms material movement by seamlessly aligning with mobile technology. Using handheld scanners and mobile devises, part movers can make material transactions from anywhere on the shop floor. Every transaction is instantly recorded in inventory, keeping the location and number of parts always up to date. Movers no longer waste hours looking for misplaced inventory, and the right materials get to the right jobs when operators need them.

A NEW LEVEL OF FINANCIAL ACCOUNTABILITY.

ERP systems with fully integrated accounting modules save time and money while leaning the entire accounting function. AR and AP management take less time. Eliminating duplicate data entry dramatically reduces human error. The system recognizes most accounting data as soon as new transactions are recorded, enabling in-the-moment financial decisions. Month-end closing of the books shrinks from weeks or days to hours. You get more done in less time while creating a culture of financial accountability throughout the business.

PURCHASING AS A COMPETITIVE ADVANTAGE.

ERP purchasing consolidates all work order and inventory data so you can make smart purchasing decisions. Purchases can be automated, giving buyers time to research vendors and negotiate better deals. Buyers can forecast future purchases based on customer history. The system even identifies when new purchasing actions are required due to job changes. ERP purchasing does all this and more – all from one screen.

REAL-TIME QUALITY.

ERP provides a robust array of tracking, statistical analysis, and reporting tools, including complete traceability of every part that moves through the shop floor. Live production data lets you measure quality by part, employee, machine, defect code and other criteria. The system automatically alerts you to non-conforming parts while jobs are in progress. Producing documentation for ISO and other quality certifications can be accomplished in minutes. When you hold employees accountable for their scrap, the cost of quality declines.

THIRD-PARTY SOFTWARE INTERFACES.

Electronic Data Integration (EDI), nesting and other software interfaces allow your ERP system to seamlessly exchange information with third-party software programs. This eliminates the need for duplicate data entry on the receiving end and prevents double entry mistakes. CAD/CAM interfaces save hours of high-cost engineer time by directly importing CAD/CAM drawings and data in digital format. Nesting interfaces send designs directly to cutting machines to optimize material usage. Payroll interfaces automatically send hours, pay rates, and other data to your payroll vendor for rapid processing. The possibilities for how much time, money and effort integrations and interfaces can save you are endless.

Get Lean and Fit with ERP

Manufacturing is a complex process, no matter what products you make or what processes you use. ERP simplifies manufacturing by providing real-time data visibility at every step of the production process. Knowing what you need to know to eliminate waste, reduce costs, and get quality parts out the door on time every is only a few mouse clicks or keystrokes away, whenever you need it.

Wondering How Your Business Is Doing Overall?

Take the 10-minute Manufacturing Health Test to see how you compare against other manufacturers. Then call us at 1.800.364.5958 start turning your business photo from a before to an after.

ABOUT THE AUTHOR

Mike Melzer serves as VP of Service & Operations for Global Shop Solutions and is a 20-year veteran of the company. As a graduate from The Colorado School of Mines, Melzer is an unparalleled leader helping the best manufacturers use their ERP software to make their shops leaner and more efficient.

To learn more about What Manufacturing Looks Like With (and Without) ERP Software, call 1.800.364.5958 or visit www.globalshopsolutions.com.

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