

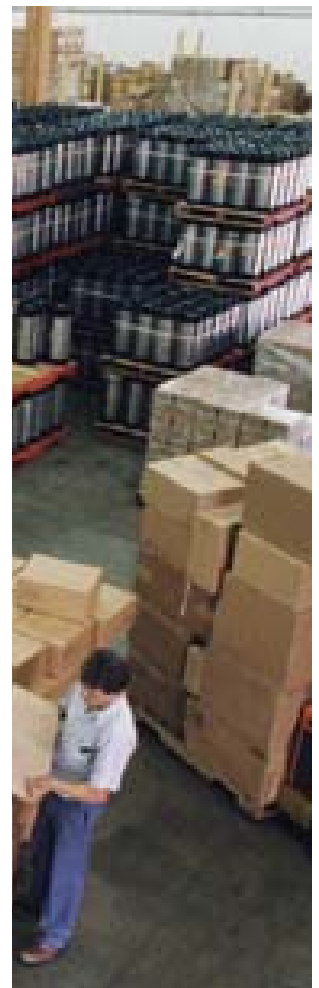
# A Complete Software Evaluation Guide for Small and Midsized Manufacturers



**sage**  
software  
*Your business in mind.*

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## Introduction

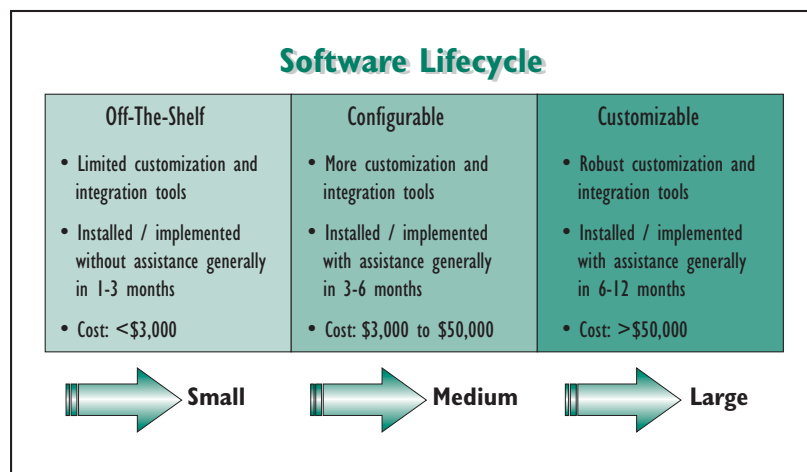
Implementing the proper business system can be as strategic and important to your bottom line as purchasing new equipment. However, implementing the wrong solution or choosing an inexperienced solution provider can have serious negative effects on your business—from lost opportunities and downtime to bankruptcy in some extreme cases. Consequently, it is imperative that manufacturers take time to clearly define their business processes and objectives before they start their search for new business software.

There are literally hundreds of software products on the market today to help manufacturers automate and manage day-to-day business requirements such as accounting, inventory management, order entry, and manufacturing. The good news is that manufacturers have plenty of options. The bad news is that many companies feel overwhelmed by the evaluation process because they don't have a roadmap to help them identify the right systems for their unique business and technical requirements.

This guide is designed to help manufacturers manage the entire software evaluation cycle from needs analysis and budget planning through software selection and implementation.

## Growth Considerations

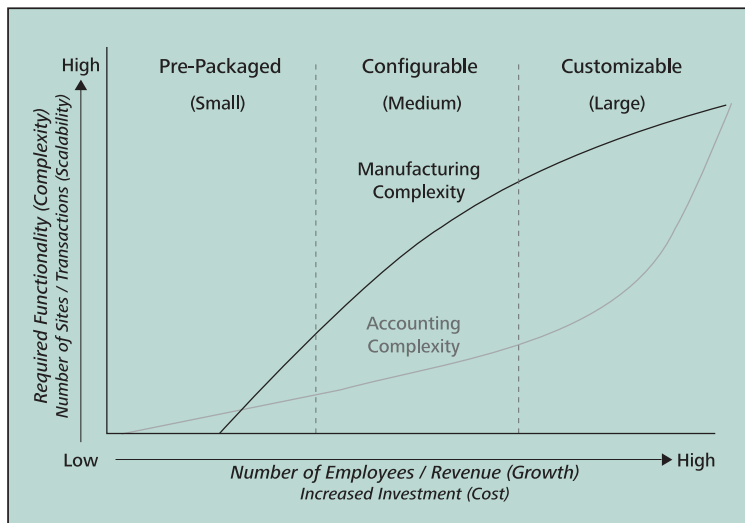
Manufacturers can choose from hundreds of software products to help them manage their businesses. In the software world, one size certainly does not fit all manufacturers. Consequently, manufacturers generally move through three major phases of growth as follows:



Many manufacturers are either too small to implement more sophisticated manufacturing software or their manufacturing processes are simple enough to manage manually. These companies tend to leverage general business software for core requirements such as general ledger, accounts receivable, accounts payable, inventory tracking, order entry, and purchasing activities. In fact, most small manufacturers purchase off-the-shelf business software before they automate the operations side of their businesses.

As manufacturers grow, their accounting requirements tend to remain relatively unchanged while the need to automate plant floor operations tends to increase rapidly. The chart below shows how manufacturers' needs change as they grow from start-up companies to more established corporations with larger revenues, increased numbers of transactions, and more employees.

## Impact on Manufacturing



At some point in time, manufacturers push their entry-level products to the limit and must either implement a stand-alone manufacturing solution to support their operational needs or they must replace their entry-level accounting application with a more functional business solution to support both financials and manufacturing.

Implementation of stand-alone manufacturing applications can extend the life of entry-level accounting solutions, but out-of-the-box integration to the existing accounting system is typically very basic. It requires some manual data entry, limited security, very little business process integration, and limited access to real-time financial and planning information. Companies experiencing or planning for future growth should therefore carefully consider the ramifications of adding disparate manufacturing solutions to existing accounting applications.

*“The company’s accounting was on a labor-intensive hodgepodge of different systems—it was cumbersome and lacked the cohesion needed to assist us in making good business decisions.”*

Synten Technical Fabrics  
Industrial Textile  
Manufacturer





## Managing Growth

Job shops and make-to-order manufacturers tend to remain relatively small and may never require full-blown enterprise business applications. However, many manufacturers are experiencing considerable growth. Consequently, manufacturers are encouraged to select a business system that can grow with their company both in terms of transaction volume and increased functionality. By selecting a scalable solution, companies can extend their investment for several years while avoiding unnecessary costs to reimplement a new solution. Further, some software publishers, such as Sage Software, provide migration tools to help manufacturers move from prepackaged software to more sophisticated business systems. These migration tools sometimes include:

**Data Migration** – Some manufacturing systems provide tools to migrate data from one system to another. Customers, vendors, items, and other relatively static data are the most common data elements moved into the new system.

**Transactional Data** – Very few business applications can move transactional data from one application to another. For example, purchase order, sales order, and work order history is very different between various applications. Companies like Sage Software that support multiple manufacturing solutions can migrate transactional or historical data from entry-level systems to medium and large business applications.

**Assisted Setup** – A few applications include built-in implementation wizards to help companies get up and running fast on their new business system. These tools help companies understand how areas within the business application interact with each other. For example, warehouses are almost always set up before items. Some applications integrate to project management tools so that project managers can assign tasks to individuals or teams in the company.

**Training Guides** – Vendors who own multiple manufacturing solutions sometimes provide guides to ease the transition from one application to another. For example, companies using entry-level products such as Peachtree by Sage, typically pick, pack, and ship products in one step while larger businesses may require two or three separate steps. In this respect, the training guide helps by stating, “Here’s how you used to perform this task and here’s how you will perform this task in your new application.”

## Manufacturing Methodologies

No two manufacturers are alike even if they make the same product. For example, one company may fabricate standard fasteners, which are stocked and sold to distributors at a nominal cost of pennies per piece while another may make fasteners that are fabricated to customer specifications and sold for several dollars because parts are sold with material certifications containing heat numbers, chemical composition, and other data required by nuclear and aerospace industries.

However, there are some commonalities between manufacturers in the way that they manage the manufacturing process. Some manufacturing software products provide deeper support for a particular manufacturing style or methodology than others. The following topics provide a high-level overview of some of the common functionality available in different types of manufacturing systems.

### Light Manufacturing / Assembly

Software is available for companies with basic manufacturing processes. These applications typically include a bill of material and one-step production entry whereby materials (and sometimes labor) are backflushed to production at standard costs, and quantities and finished goods are automatically posted to inventory. These applications are ideal for value-added distributors and assemblers who do not need detailed, multi-step work orders, work-in-process tracking, scheduling, and more sophisticated operational management tools.

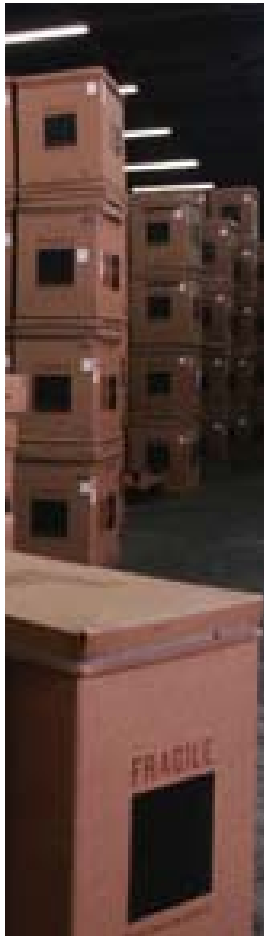
### Make to Stock

Many traditional manufacturing systems are designed for companies with standard product lines such as bicycles, consumer electronics, and appliances. These systems are designed to use sophisticated sales forecasts to determine adequate stocking levels that meet customer demand. New product orders are fulfilled from existing stock and production orders are created to replenish finished goods inventory. Customers are typically wholesale distributors or large retailers who buy in large quantities.



*“Most of the software we looked at was designed for discrete production, like making an airplane wing. But food processors like us often have complicated blended formulas with layers of subformulas. A discrete model just doesn’t work.”*

Trans-Ocean Products  
Seafood Processor



## **Make to Order**

There are many different types of software for make-to-order (MTO) manufacturers. Functionality will vary depending on whether the company is a job shop, assemble-to-order, configure-to-order or engineer-to-order manufacturer. All of these applications are designed to support MTO manufacturers who typically have very small on-hand finished goods inventories.

### **Job Shop**

Job shop software is highly specialized for industries such as tool and die shops with large work-in-process inventories but very small raw material and finished goods inventories. These applications provide extended solutions to analyze work in process quantities and costs as well as detailed reports to compare estimated and actual costs on a job-by-job basis.

### **Assemble to Order**

Assemble-to-order (ATO) software provides tools to help manufacturers maintain adequate stock of raw materials and components, which are later assembled when customer orders are received. ATO applications are therefore similar in many respects to light manufacturing systems with additional tools to analyze production lead times and track work in process through production work orders.

### **Configure to Order**

The heart of a configure-to-order (CTO) system is the product configurator. Configurators help manufacturers manage complex options and values that vary from item to item. For example, an apparel manufacturer may make thousands of shirts that vary depending on the neck style, sleeve length, and color. Each unique configuration may result in a unique inventory item, different costs, and varied pricing. Rules-based product configurators help companies manage option and value relationships. For example, short sleeve shirts may only be available in white and black—not green or red. A rules-based configurator will prevent an order from being taken for items that can’t be manufactured based on configuration rules.

### **Engineer to Order**

Engineer-to-order (ETO) manufacturers rely on computer-aided drafting (CAD) systems to design the products they manufacture. ETO software often provides an inquiry to view engineering designs directly from the manufacturing application. ETO software also provides engineering change order (ECO) capabilities to track design changes for bills of material.

## Batch Process

Food, beverage, chemical, pharmaceutical, and other manufacturers typically make products in batches from formulas as opposed to assembling products using a bill of material. Batch process applications have very specific manufacturing features that often include formula definition, batch sizing, quality control and laboratory management, material safety data sheets, and nutritional labeling. Very few discrete manufacturing applications fully support all the needs of batch process industries.

## Project / Contract / WBS

Some companies manage the manufacturing process as part of a larger project or contract. For example, a company may manufacture doors and windows that they install in customer locations. Software designed for these manufacturers provides tools to define and track costs as part of a phase or task that is part of a larger project. Other project-oriented business systems support work breakdown structures to manage reporting and billing requirements for government, aerospace, and defense customers.

## Lean / Just-in-Time

Lean manufacturing means different things to different people. It can include systems and processes such as single-minute exchange of dies (SMED), total quality management (TQM), Six Sigma, Kanban, 5S, or theory of constraints (TOC) by Eli Goldratt among many other systems. In general, all lean manufacturing applications aim to reduce inventories, improve quality, and increase factory throughput.

## Remanufacturing / Disassembly

Specialized manufacturing software is available for companies that disassemble or repair previously manufactured products. These systems help companies track co-products or multiple parts produced from a single work order. Other common features include core<sup>1</sup> tracking. Remanufacturing has a major impact on bill of material and cost structures, as each core may require different raw materials (replacement parts) and labor operations.

<sup>1</sup>Cores are products that are returned for reconditioning or refurbishment. Cores can include transmissions, toner cartridges, and similar products.





## Industry Requirements

Manufacturing software is often specialized depending on the types of products being made. For example, some of the most common manufacturing applications on the market are designed for manufacturers of industrial products, consumer packaged goods, high-technology products, wood products, and printing and publishing industries.

Industry-specific software products are attractive to manufacturers because they provide deep functionality designed to meet their unique industry needs. However, most industry-specific products provide only basic accounting and distribution features. In addition to industry solutions, there are hundreds of niche solutions for wineries, bakeries, screw machine shops, and other industries.

Industry and niche manufacturing software publishers are generally much smaller than publishers of more general manufacturing solutions. Consequently, industry and niche publishers typically allocate most of their research and development to the manufacturing side of their business applications with little investment in accounting, business intelligence, customer relationship management, human resources, asset management, payroll, and other non-manufacturing capabilities. As such, manufacturers should carefully consider all of their requirements and look for the best overall solution to meet their needs.

### **Industrial & Automotive**

Software designed for industrial and automotive manufacturers provides specialized functionality including calculations for machine setup and teardown, estimating, indented bills of material, product configuration, engineering change management, and more. Companies in these industries include metal fabricators, machinery and transportation equipment manufacturers, and manufacturers of rubber, plastics, and primary metals. A significant number of smaller industrial products manufacturers are custom job shops. Others have standardized products and are well served by general discrete manufacturing software products.

### **Consumer Packaged Goods (CPG)**

Food, beverage, chemical, and pharmaceutical manufacturers have very complex supply chain and customer requirements. As such, software designed for CPG manufacturers often includes formulation, laboratory management and quality control, shelf life and expiration dating, government and compliance reporting, lot tracking, unit of measure conversions, packaging and labeling, electronic data interchange (EDI), and other requirements.

## High Technology & Electronics

Technology industries include electronic, electrical, and instrument manufacturers. Engineering change management is a must for most manufacturers in this industry because components change on a regular basis. Additional functionality is often needed to track serialized components and manage product warranties. Integration with CAD drawings and wiring schematics is also common.

## Textile & Apparel

Software for apparel and textile manufacturers typically includes product configuration capabilities, pricing or style matrices, and specialized functionality to track dye lots, thread counts, and remnants.

## Lumber & Wood

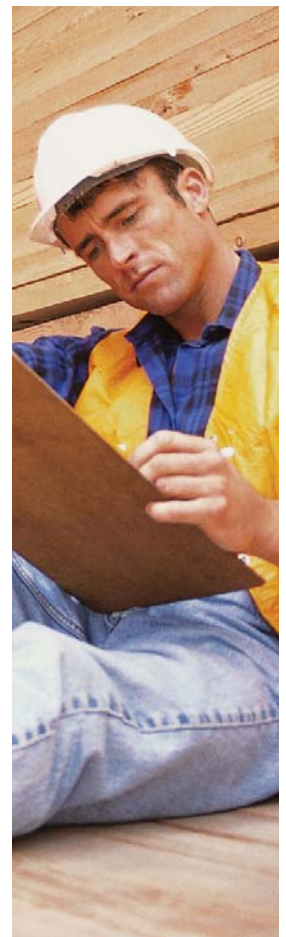
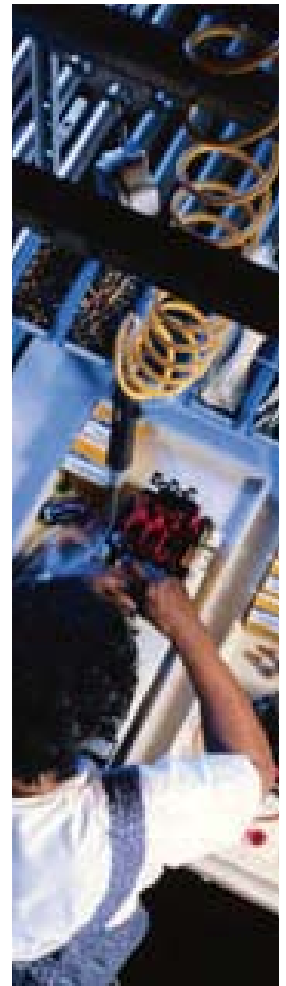
Lumber and wood products software typically includes lot attributes to track product grade and specialized inventory systems to manage dimensional inventories (length x width x thickness).

## Printing & Publishing

Printing and publishing industries resemble manufacturers in that they convert raw materials (paper and ink) into a finished product (stationary, business cards and forms, books, and more). They have machines, work centers, and work in process but they often cannot use general manufacturing software without modifications. Specialized software is available to support ganging (production of multiple customer orders on a single production order), estimating (with integration to supplier price lists), and integration with pagination and design software from software vendors like Adobe® and Quark®.

## Other Industries

Software is also available for other industries such as petroleum processing, manufacturers of paper products, and other specialized manufacturing, including manufacturers of toys, games, jewelry, signs, and other specialized industries. Functionality varies widely depending on industry requirements. For example, jewelry manufacturers require flexible inventory costing as precious metal prices fluctuate over time and ready-mix concrete manufacturers often require route management systems to track deliveries to customer locations.





## Software Evaluation

Evaluating manufacturing software can be a very overwhelming task for small and mid-sized manufacturers due to the sheer quantity of products to choose from and the complexity of each system. Manufacturers typically manage their evaluation process either in-house or through contracted software consultants and evaluation services.

### In-House Evaluation

Some companies prefer to manage the software evaluation process themselves. They typically develop a long list of potential candidates through multiple sources that may include word of mouth references from companies in their industry, Internet searches, online software directories and product reviews, business and trade magazines, manufacturing and software trade shows, and other sources. Companies that conduct their own software evaluations should dedicate an employee to the project of collecting and organizing information for the evaluation team.

### Software Consultant

Some manufacturers contract software consultants to manage the evaluation process. As with any industry, there are good consultants and poor consultants. Manufacturers should consider consultants with several years of experience and those who are not biased toward a product that their company represents. Many accounting firms and manufacturing extension partnerships also provide software consulting and evaluation services. In addition, there are a handful of credible, unbiased sources that provide detailed product reports and software evaluation services.

*“We previously used a home-made system to track returned merchandise, but it was inefficient. Our new RMA module records whether the order requires credit or replacement and automatically initiates the correct action. We’re anticipating a big time savings as we use the system to process customer returns.”*

Veo, Inc.

Digital Imaging Products Manufacturer

## Evaluation Process

Manufacturers should form an internal software evaluation team comprised of representatives from different departments. A typical evaluation team will include employees from various departments within your business.

An employee should be designated as the project leader. The project leader should be responsible for managing the evaluation process. He or she will likely do a lot of the up-front work to build the initial list of software products and will work with contracted consultants or evaluation services throughout the evaluation cycle. Project leaders will also schedule team meetings and software demonstrations.

The evaluation process typically includes five phases—research, evaluation, selection, and implementation.

Needs Analysis	<ul style="list-style-type: none"> <li>• Establish an internal evaluation team with representatives from various departments within your company</li> <li>• Hire consultant or contract evaluation service</li> <li>• Develop needs analysis outlining requirements for a new system</li> <li>• Establish metrics using current system for future ROI calculations</li> </ul>
Research	<ul style="list-style-type: none"> <li>• Read trade and business magazines</li> <li>• Attend manufacturing and software trade shows</li> <li>• Use software directories and product reviews</li> <li>• Use search engines to find related information</li> <li>• Ask other companies in your industry what they're using</li> <li>• Contracted consultant or evaluation service will also provide in-depth research</li> </ul>
Evaluation	<ul style="list-style-type: none"> <li>• Use the needs analysis to develop a request for proposal (RFP)</li> <li>• Send the RFP to vendors identified during the research phase</li> <li>• The evaluation team should use research and RFP information to create a list of 5-10 potential solutions</li> <li>• Schedule overview demos of each product. Overview demos will typically take 1-2 hours</li> <li>• The evaluation team should meet after the overview demos to pick 3-5 vendors for a more detailed product demonstration. Detailed demos generally last 4-8 hours.</li> </ul>
Selection	<ul style="list-style-type: none"> <li>• Post-demo team meeting(s) and product selection</li> <li>• Contact the vendor or reseller, negotiate pricing, define implementation plan</li> <li>• Coordinate information transfer from evaluation team to implementation team</li> </ul>
Implementation	<ul style="list-style-type: none"> <li>• Define implementation roles and responsibilities</li> <li>• Establish implementation timeline</li> <li>• Conference room pilot before going live</li> <li>• Run new system parallel to existing business system for 1-4 weeks</li> <li>• Implementation team meetings should continue to meet every month for the first 1-2 years after implementation to monitor progress, discuss ways to optimize the new system, and measure ROI achieved through improved processes (compared to the former system)</li> </ul>





## RFP Components

As mentioned earlier, a request for proposal (RFP) can help manufacturers collect and analyze information about each software product and vendor that they are considering. Sample RFPs are readily available on the Internet. Most software consultants and evaluation services can also provide needs analysis and RFP templates. In general, most RFP templates include the following sections.

### Vendor / Software Profile

- General company information including address, Web site, revenues, stock profile (if publicly traded), years in business, customer base, key executives, and sales contacts.
- Company stability and viability analysis. The market for manufacturing software is currently undergoing considerable consolidation. Like most maturing industries, only a handful of leading vendors will emerge when consolidation is complete. It is imperative that manufacturers consider vendor size and presence in their industry when selecting a new business application as smaller vendors will be at a considerable disadvantage and could be acquired by larger vendors who may discontinue their solutions.
- Software profile including technology platforms supported (such as databases, operating systems, and hardware), manufacturing styles or methodologies supported, customer profile, product version, release descriptions, and more.

### System-Wide Features

- General system-wide features including report writer, business intelligence capabilities, e-mail and fax integration, data alerts, security capabilities, decimal precision, critical field lengths (such as GL account, customer ID, vendor ID, item ID, etc.), online help and support for multiple companies, multiple sites, and multiple currencies.
- Customization and integration capabilities including data import/export utilities, integration and customization tools, and links to attached files or documents.

### Accounting / Purchasing

- Fundamental financial features including general ledger, accounts payable, accounts receivable and bank reconciliation functionality.
- Advanced financial features for larger companies including budgeting, national accounts, allocations, consolidations, debt collection, fixed asset accounting or depreciation, and multicurrency.

- Online transaction tools including credit card processing, credit checking, automated clearing house (ACH), and electronic funds transfer (EFT).
- Manufacturing cost accounting including FIFO, LIFO, actual (lot costing), average, standard, and warehouse costing (for maintaining cost by location). Also, the ability to track specific costs to the General Ledger for overhead, fixed setup, fixed run, variable setup, variable run, direct labor, material, outside process and support for machine cost/rates, ABC costing, and landed costs.
- Purchasing capabilities including requisitions, blanket orders, release schedules, and vendor request for quote (RFQ) tracking.

### **Customer Service / Order Entry / Pricing**

- Multiple order entry methods including customer service order entry, point-of-sale cash register integration, electronic data interchange (EDI), and Web storefronts for B2B or B2C orders.
- Flexible pricing including effective dates, contract pricing, customer pricing, promotions, volume or dollar-based pricing, discounting, and commission calculations.
- Online capabilities including product support knowledge base, customer self-service (account status/maintenance and shipment tracking), online catalog management, and more.
- Additional features for product configuration and/or guided sales, returned materials authorization (RMA), rebates, warranties, available-to-promise or capable-to-promise utilities, field service, item/lot reservations, blanket orders, and support for customer release schedules.

### **Inventory / Warehouse Management**

- Inventory and item features such as lot/serial tracking, bin locations, consigned inventory, basic and advanced picking (for example, zone, wave, FIFO picking), item attributes, UOM conversions, product grouping by buyer or purchased product line, physical inventory calculations, and more.
- Shipping capabilities such as shipping and handling charge calculations, shipment tracking, bill of lading creation, and creation of SARA reports or MSDS documents.
- Receiving features including assisted put-away rules, cascade receiving, quarantined inventory, and vendor analysis.





- Advanced warehouse tools including bar coding, radio frequency handheld integration, RFID support, three-step inventory transfers, container tracking, pallet building, route management, and more.

### **Sales / Marketing**

- Sales force automation including contact management, opportunity tracking, territory definition, sales team management, sales forecasting, estimating, quoting, proposal generation, remote access, and data synchronization.
- Marketing automation such as campaign tracking, literature fulfillment, budget and revenue management, telemarketing and sales scripts, and more.

### **Manufacturing**

- Discrete bill of material structure and routing definitions, CAD integration, outside processing (subcontracted operations), engineering change control, work order creation, material issues, labor entry, real-time shop floor control, and more.
- Batch process features such as recipe/formula definition, laboratory management and quality control, batch-sizing, cost analysis, nutritional labeling, compliance management, and more.
- Material planning capabilities including material requirements planning, sales forecasting, and inventory replenishment.
- Scheduling of resources including labor, tools, work centers, and machines in addition to preventative maintenance capabilities.

### **Human Resources & Payroll**

- Employee management including time and attendance features such as time clock integration, time-off requests, attendance tracking, training and certification, recruitment, retirement, and benefits administration.
- Payroll processing including outsourced payroll services, direct deposit, deductions for union dues, piece-rate and crew incentives, overtime pay calculations, benefits deductions, and more.
- Benefits administration features for management of dental, vision, health, retirement, and other company-provided benefit plans including optional online benefits enrollment capabilities.
- Federal and state tax and reporting regulations including FMLA, COBRA, OSHA, HIPPA, ERISA, and more.

## Project Budget

The leap from entry-level accounting products to more configurable business software represents a major investment for most manufacturers. For example, the costs to purchase entry-level systems such as Peachtree by Sage are typically less than \$3,000. These products can be installed and implemented by most people with little or no training or assistance, and can serve the company's needs for many years as they grow from a start-up to a multi-million dollar corporation. Manufacturers that replace entry-level business software with more complex solutions most often realize increased costs such as:

### **Software / Maintenance / Support**

Prepackaged business software usually supports up to five or 10 concurrent users. Software for growing manufacturers can support virtually unlimited users and typically starts at around \$10,000. Pricing is generally based on the number of concurrent users and the number of modular applications purchased. In general, manufacturers should expect to pay \$3,000 to \$4,000 per concurrent user for most common manufacturing solutions. Prepackaged software typically includes limited product and user support. Product updates are often provided free of charge from the publisher's Web site. More sophisticated business software is usually sold with an annual maintenance plan providing customers with access to free updates and new versions of the software. Maintenance plans are highly recommended as they provide new features and keep the software compatible with current technologies. Maintenance contracts usually range from 10% to 30% of the product's suggested list price (not the negotiated or discounted price).

### **Implementation / Training / Customization**

Unlike off-the-shelf accounting software, more complex manufacturing systems should be installed and implemented with the assistance of certified consultants. Consequently, manufacturers should plan to spend about as much (or slightly more) on implementation as they do for the software itself. Implementation costs often cover system installation, configuration, data migration, training, customization, integration to other business applications, and related services.

### **Hardware / OS / DB**

Prepackaged accounting software typically includes a built-in database and can run on standard PCs. Users will have to purchase operating system software and licenses. Overall, hardware and operating system expenses should cost around \$5,000 for smaller companies. More sophisticated software typically does not



*“When we cost out a government or military contract, we no longer have to dig up old purchase orders and add figures manually. The system puts all the numbers at our fingertips, so the job takes an hour or two instead of days. And our bids are now much more closely honed, giving us an incredible competitive advantage.”*

Rocky Mountain  
Instruments, Inc.  
Optical Components  
Manufacturer

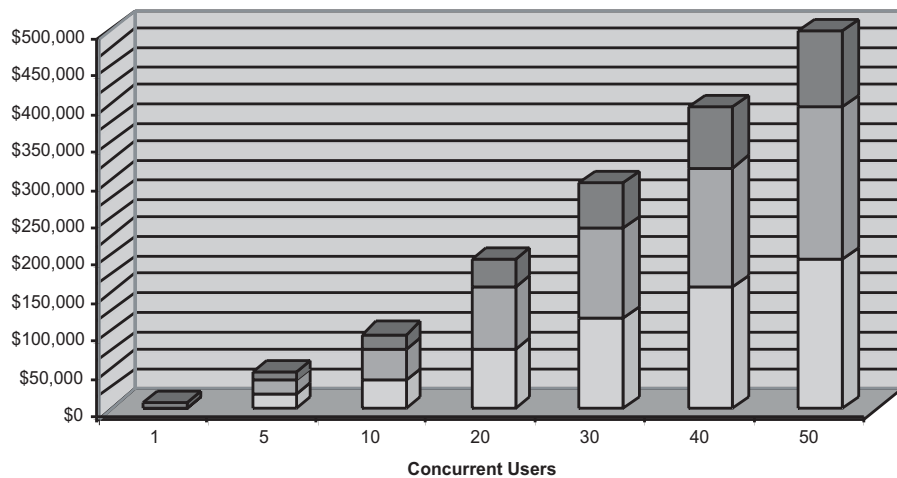


include the application database. Consequently, larger manufacturers can expect to spend about half as much on hardware, database software, and operating system licenses as they spend on software/maintenance/support. Costs may be significantly lower if companies can reuse existing personal computers and servers, and they currently have operating systems and databases required to support the new system.

### **Total Cost of Ownership**

The following chart shows typical costs manufacturers can expect to pay for a new manufacturing system. Costs can and will vary based on software functionality, user counts, technology platforms, and other variable options.

**Estimated Total Cost of Ownership**



### **Achieving an ROI**

Significant cost savings are realized by most companies who automate their businesses for the first time or companies that move from antiquated applications to modern manufacturing systems. However, cost savings are often difficult to measure since efficiency improvements and cost avoidance are not always visible. Still, manufacturers can measure some aspects of their businesses to calculate general returns on their investment.

In order to calculate ROI, manufacturers must first establish benchmarks on common activities using their current business system. For example, how long does it take to process an order or a customer return, how many orders are shipped late per month, and what are the associated carrying costs per item in inventory? The table on the following page highlights how companies may achieve a positive return on investment.

## Sample Annual Cost Savings

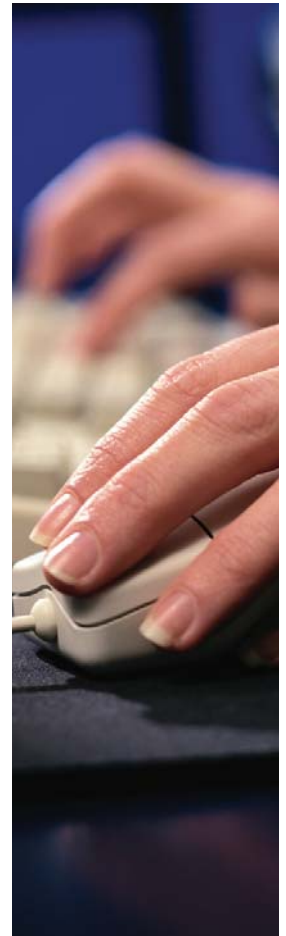
Old System	New System	Rationale	Calculation	Cost Savings
\$50 scrap/order	\$30 scrap/order	More accurate inventory control, material issues and BOM definition	\$20 Avoidance X 1,000 Orders	\$20,000
Avg. safety stock levels @ 100 units/SKU	Avg. safety stock levels @ 75 units/SKU	More accurate material planning and forecasting	25% Stock Reduction X 1,000 SKUs X \$100 Carrying Cost/SKU/Year	\$25,000
10% bid/win	15% bid/win	More accurate costing and estimating	1000 Bids/Year = 50 More Orders X \$100 Profit/Job	\$5,000
Annual maintenance fees @ \$100k	Annual maintenance fees @ \$20k	Companies moving off tier one ERP products often significantly reduce maintenance and support fees	\$80,000 Savings	\$80,000
40 hours to process period-end transactions	20 hours to process period-end transactions	Reductions in data entry, system processing speed, and access to data improves period-end processing	13 Periods X 20 Hours X \$30/Hour	\$7,800

## Conclusion

Not all manufacturing systems are created equal. Each product and vendor has their strengths and weaknesses. Some systems provide rich industry-specific functionality but lack fundamental accounting features, while others provide a broader feature set that can be customized to meet the needs of many different manufacturing methodologies and industry requirements. Further, many small companies automate their accounting and inventory processes before tackling their manufacturing operations. These companies must prepare themselves for a huge leap in terms of the investment they make and training required to implement a more sophisticated business application.

Manufacturers need to consider future growth, vendor viability, product stability and functionality, the availability of third-party add-on solutions, total cost of ownership, and potential return on investment when choosing a manufacturing software application—even if they are automating their business for the first time with pre-packaged, entry-level solutions like Peachtree by Sage.

A defined software evaluation process will help manufacturers identify the best solution to meet their needs. In addition, information gleaned from the evaluation

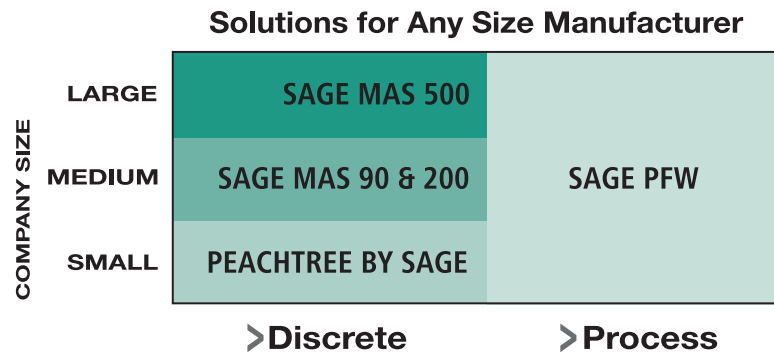




process should be used during the implementation process to keep the project on track and on budget. Successful implementations can reap huge company-wide benefits including significant reductions in data entry, elimination of data entry errors, improved system security, and significant improvements to the company's bottom line.

## About Sage Software

Sage Software provides manufacturers with a logical migration path to manage the growth process as companies move from pre-packaged software to enterprise-level business applications. Data migration utilities and in-family product discounts help companies reduce costs and ease the transition from one system to the next.



As part of The Sage Group plc, which has annual revenue of more than \$1 billion, Sage Software is a stable, industry-leading provider of business software for small and medium-sized discrete and process manufacturers with up to 1,000 employees and \$500 million in annual revenues. With more than 80,000 manufacturing customers, Sage Software truly understands the unique and varied business requirements affecting manufacturers today. The product suite for Sage Software includes all of the applications that manufacturers need to automate their businesses including accounting, distribution, manufacturing, human resource and payroll, contact management and customer relationship management (CRM), and fixed asset management.

## Sage Software Manufacturing Products

Features	Peachtree by Sage	Sage MAS 90 and Sage MAS 200	Sage MAS 500	Sage PFW
Kitting and assembly	X	X	X	X
Work Orders/Work Tickets	X	X	X	X
Formulation		X		X
Lot Tracking		X	X	X
Serial Tracking	X	X	X	X
Laboratory Management				X
Quality Control			X1	X
Co-products/By-products		X	X	X
Materials Requirements Planning (MRP)		X	X	X
Fixed Asset Management	X	X	X	X
Human Resources & Payroll	X	X	X	X
Disassembly	X	X	X	X
Bar Coding	X1	X	X1	X1
Labor & Tool Scheduling			X	
Multi-facility			X	X
Multi-company	X	X	X	X
Product Configurator		X1	X	
Backflush material/labor/overhead		X	X	X
Material Safety Data Sheets (MSDS)				X
Project Management / Job Costing	X	X	X	
After-the-fact production reporting	X	X	X	X
Real-time production reporting		X1	X	X
Finite Scheduling		X1	X	X
Infinite Scheduling	X	X	X	X
Quotations	X	X	X	X
Estimating			X	
Standard Costing		X	X	X
Average Costing	X	X	X	X
Actual (Lot) Costing		X	X	X
FIFO & LIFO Costing	X	X	X	X
21 CFR Part 11				X
CRM/SFA	X	X	X	X

X1 = Functionality provided by Sage Software partners.

*“...Sage Software already has what SMB competitors Microsoft and Oracle so desperately want—a direct connection with small businesses—as well as a solid suite of mid-market products to grow them into...Sage Software is moving into position to become one of the strongest vendor forces in the SMB solutions market.”*

Summit Strategies, Market Analyst

## Additional Resources

### Sage Software Resources

- Manufacturing Resource Center – [www.sagesoftware.com/mfg](http://www.sagesoftware.com/mfg)
- Terminology – [www.sagesoftware.com/vertical/manufacturing/terms.cfm](http://www.sagesoftware.com/vertical/manufacturing/terms.cfm)
- Peachtree by Sage – [www.peachtree.com/peachtreeaccountingline/manufacturing](http://www.peachtree.com/peachtreeaccountingline/manufacturing)
- Sage MAS 90 / Sage MAS 200 – [www.sagesoftware.com/mas90](http://www.sagesoftware.com/mas90)
- Sage MAS 500 – [www.sagesoftware.com/mas500](http://www.sagesoftware.com/mas500)
- Sage PFW – [www.sagesoftware.com/pfw](http://www.sagesoftware.com/pfw)

### Trade Magazines

- APICS Magazine – [www.apics.org](http://www.apics.org)
- eWeek – [www.eweek.com](http://www.eweek.com)
- Industry Week – [www.industryweek.com](http://www.industryweek.com)
- Integrated Solutions – [www.integratedsolutionsmag.com](http://www.integratedsolutionsmag.com)
- Managing Automation – [www.managingautomation.com/maonline/magazine](http://www.managingautomation.com/maonline/magazine)
- MSI Magazine – [www.msimag.com](http://www.msimag.com)
- PC Magazine – [www.pcmag.com](http://www.pcmag.com)
- Start Magazine – [www.startmag.com](http://www.startmag.com)
- The Manufacturer – [www.themanufacturer.com](http://www.themanufacturer.com)

### Web Directories

- Managing Automation – [www.managingautomation.com/maonline/directory](http://www.managingautomation.com/maonline/directory)
- Technology Evaluation – [www.technologyevaluation.com](http://www.technologyevaluation.com)

### Consultants & Evaluation Services

- Accounting Software Advisor – [www.accountingsoftwareadvisor.com](http://www.accountingsoftwareadvisor.com)
- Brown, Smith & Wallace – [www.bswllc.com](http://www.bswllc.com)
- CTS Guides – [www.ctsguides.com](http://www.ctsguides.com)
- K2 Enterprises – [www.k2e.com](http://www.k2e.com)
- Softselect Systems – [www.softselect.com](http://www.softselect.com)
- The Accounting Library – [www.accountinglibrary.com](http://www.accountinglibrary.com)

### Industry Trade Shows

- APICS Conference & Expo – [www.apics.org](http://www.apics.org)
- National Manufacturing Week – [www.manufacturingweek.com](http://www.manufacturingweek.com)
- Pacific Design & Manufacturing – [www.devicelink.com/expo](http://www.devicelink.com/expo)



56 Technology Drive  
Irvine, CA 92618-2301  
800-854-3415  
[www.sagesoftware.com](http://www.sagesoftware.com)

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