



The Business Case for Integrated ERP and Job Management

Table of Contents

Executive Overview	3
Challenges of Make-To-Order Manufacturers	3
On-Time Delivery	3
Profitability	3
Disparate Software Systems	4
Benefits of Integration	4
Customer Satisfaction	5
Increased Profitability	5
Job Satisfaction	5
Identifying the Optimum Solution.....	5
The Winning Stratagem	6
A Best Practices Example	6
Return On Investment.....	7

Executive Overview

In today's crowded marketplace, operational excellence is essential to success. Customers pick and choose with whom they will do business. Even small errors can cause them to go looking for alternatives. The Internet enhances the visibility of available offerings, and Web price wars can drive prices down. To offer competitive pricing, organizations must have strong cost control measures and excellent visibility into profitability.

A fully integrated software system that connects data in all aspects of the business, from accounting to sales to the shop floor, can give organizations the edge that differentiates them from the competition. Over the last two decades, business management software systems have steadily evolved and become both more capable and more affordable. Today even small to mid-sized manufacturers can leverage an integrated system to enjoy greater profitability and enhanced customer satisfaction.

Challenges of Make-To-Order Manufacturers

Organizations that make products to order (MTO) may have an even stronger need for operational excellence than the general market. Customers ordering custom-made products have higher expectations for service and quality than those purchasing off-the-shelf goods. The variability of materials and labor required for MTO products make it tough to arrive at an accurate cost of finished goods.

On-Time Delivery

Accurately estimating delivery time and meeting or exceeding the date may be the single most important factor in maintaining customer satisfaction. Late deliveries tell your customers that you can't be relied on to provide their product when you promised you would. If you are selling business to business, your late delivery now impacts their business. They must either speed up their production schedule or miss the promised date to their customers in turn.

The net result is that if your customers don't think you can deliver on time, no level of quality or reduction in price is going to persuade them to do business with you again. On-time delivery is the key to a successful business, and an ERP (enterprise resource planning) system that delivers the best tools to keep production running on schedule is clearly essential.

Profitability

Perhaps your organization does a great job with customer service, jumping through hoops to assure on-time delivery. Purchase orders are expedited and you pay rush-delivery charges. Workers are paid overtime to stay until the job is complete. You deliver the product on time, but your profitability may be eaten up by high costs. Visibility into the profit on individual jobs is essential to the overall profitability of the organization.

"It takes Tigé, a manufacturer of watersport boats based in Abilene, Texas, two weeks and over 75 manufacturing steps to build each boat. Compound that by the production of 12,000 boats each year—each custom built to order—and you begin to understand the power Tigé requires from their software."

— Clark Haley
BCS ProSoft, Inc.

Productivity Quality, Inc. (PQI), a provider of quality assurance measurement solutions, had software needs that weren't being met. The system couldn't track the service portion of the business—a big issue since service brings in 25 percent of annual revenue. So PQI went shopping. At the top of their wish list, in addition to advanced accounting features, was the ability to monitor service operations on a project-by-project basis.

Understanding which products are more profitable can assist sales staff as well, allowing them to focus on the sale of products that are more profitable. So, the second key to success is a job costing system that provides management with a clear understanding of profit margins and how rush charges and other extra costs impact them.

Disparate Software Systems

As we have seen, excellence in both financial management and production control are equally important to MTO manufacturers. However, accounting executives and production managers traditionally have not worked together to seek software systems to meet their requirements. Accounting managers seek and implement products offering excellent cost tracking, robust audit trails, and financial reporting. Production managers typically seek to acquire a best-of-breed MRP (material requirements planning), job scheduling, and product configuration system. The result is two disparate systems that do not share information, creating additional labor and potential for error when data must be re-keyed or paperwork is mislaid. Hours must be spent reconciling cost differences between the two systems.

Depending how an MTO manufacturing company has evolved, it may have only one or the other of these systems. The organization that evolved from a single entrepreneur who developed an excellent product concept is likely to have acquired a specialized production system and be limping along with a poor understanding of profitability and limited audit trails on the accounting side. If such a company was acquired early on by an investor, chances are good that there is an excellent financial management system in place and production planning may even still be a manual process. Sooner or later the day arrives when the size and growth of the business requires that either of these two individuals bring in a manager to deal with the “other” side of the business. It isn't long before that manager is saying, “We have outgrown our ERP system. I need the tools to do the job you hired me for.”

It is not through the fault of internal management that this situation has arisen. The root of the problem lies in the evolution of ERP systems themselves. Some systems began as core accounting systems. They have evolved their core accounting functionality over a period of years, and feature strong accounting controls and audit trails. Production control capabilities, if they are available at all, are very basic because they were added to the system as an afterthought. Other software systems were initially developed to meet industry-specific needs. In the case of manufacturing systems, the initial focus was on developing production planning and scheduling, product configuration, and shop floor management capabilities. With these products, accounting capabilities are minimal or non-existent.

Benefits of Integration

A business management system that provides strong capabilities for both accounting and production management functions, and effectively connects these functions together, is powerful indeed. The fortunate organization that owns one enjoys benefits in several areas: customer satisfaction, profitability, and staff's sense of accomplishment and satisfaction.

Customer Satisfaction

Causes of customer dissatisfaction arise primarily from two areas: failure to deliver as promised, and errors on orders. With an integrated production scheduling system, there is less chance that the schedule will be compromised due to insufficient materials, since the inventory and purchasing systems are fully integrated. When a customer order is placed, the customer service representative has full visibility into the current production schedule and can provide realistic delivery times.

A well-integrated system also means no re-keying of information. The order information entered by the person who interacted with the customer flows seamlessly into the production system, with no possibility of data entry errors or, worse still, paperwork mislaid and orders not processed at all.

A customer who receives the correct product on a timely basis is highly likely to do business with you again, and better still, may even recommend your products to others.

Increased Profitability

A fully connected system can result in cost savings in several areas. Material requirements can be accurately predicted and acquired without rush charges, while at the same time avoiding the carrying costs of excess stock. Production costs roll up seamlessly into the financial reporting system, allowing management to price products profitably and equitably. Accurate costing reports also allow management to see which product lines are more profitable so the business can be expanded in the right direction. Labor costs are reduced both by minimizing overtime on the shop floor and by removing the need for staff to spend time re-keying data from the production system to the financial system or vice-versa.

Job Satisfaction

The power of an organization that truly works as a team is not to be underestimated. Most disagreements and finger-pointing between staff members occur as a result of missing or incorrect information. When all your systems are connected together, everyone has the same holistic view of the business. The smooth integrated workflow helps create a harmonious workplace with fewer conflicts and higher overall job satisfaction.

By integrating accounting and production, the configuration of a boat order at Tige has been reduced from hours to minutes. "Sage ERP MAS 200 with JobOps cut our data entry processing time by 70%"

— Rick McDonald
Controller, Tige

"The interface between JobOps and Sage ERP MAS 200 is so smooth that it all feels like a single package. Together, they give us a very robust system that does everything we need—a perfect match for our size of firm."

— JoAnn Linnell
Accounting Manager
Productivity Quality, Inc.

Identifying the Optimum Solution

The benefits of integrating the accounting and production systems seem obvious—why then is it so rare? Recognizing that both sides of the business are demanding strong solutions, many software publishers have taken steps to integrate the two systems. Rather than trying to develop functionality outside the publisher's core expertise, it seems, on the surface, to be easiest to partner with a publisher expert in the opposite area. But there is considerable complexity involved in marrying two disparate systems. Differing data structures won't map well together. The manufacturing system was not designed to drive accounting journal entries. The two systems have a different look and feel and navigate differently. Poor workflow integration may create discrepancies between finance and production. Production needs inventory stock levels to function in real-time as materials are pulled off the shelf, sometimes before the product has been officially "received" into inventory, and accounting can't cope with these transactions until the costs are known.

The Winning Stratagem

An ideal approach is to take an excellent existing accounting and ERP system and partner with a developer with strong domain expertise to build the production system right into it. What makes this approach relatively rare is that the developer must not only be a domain expert in production control, scheduling, and product configuration, they must also be expert with the development tools and data structures of the ERP system they propose to enhance.

When such a developer can be found, the result is truly powerful—a solution built from the ground up using the requirements of manufacturing production control, but designed specifically to take full advantage of the strengths of the accounting system.

A Best Practices Example

An excellent example of this type of solution is the Sage ERP MAS 90 and 200 system integrated with the JobOps Job Management Software modules for production control from Synergistic Software Solutions. Sage ERP MAS 90 and 200 are market leading systems renowned for strong accounting controls, that are used and recommended by more CPAs than any other products in their class. Synergistic Software Solutions has strong domain expertise in both Sage ERP MAS 90 data structures and development tools from 19 years as a certified developer, and also in production management system requirements derived from working with MTO manufacturers on their software needs since 1984.

Because the JobOps modules were developed specifically for Sage ERP MAS 90 and 200, the design did not have to resolve potential conflicts with data structures. The look and feel and navigation are not only identical, but much of the manufacturing functionality runs right inside many of the Sage ERP MAS 90 and 200 modules. The result is a system which provides the tools for manufacturing management to focus on job profitability and on-time delivery without sacrificing accounting control. The scheduling system alerts management of capacity issues which could impact on-time delivery and provides tools to correct problems early. Automated purchasing tools assure that materials needed will be available to keep the production schedule running smoothly without having to carry excess stock, or order materials before they are needed, thus, keeping the cash flow in control. Real-time tracking of labor and materials used on the job provide alerts during production if cost overruns are predicted even before those costs are posted to the general ledger, while allowing accounting and finance to follow proper GAAP and audit procedures.

The Sage ERP MAS 90 or 200 with JobOps workflow begins with the core JobOps module which links purchase orders to sales orders. From sales orders work tickets are automatically created, breaking out the tasks for the various steps needed, such as calibration and assembly. Work in progress reports make it simple to keep an eye on open orders and know when they're ready to be shipped. Service departments can use JobOps to better monitor inventory to respond quickly to customers' needs. From a finance standpoint, the two products working together allow organization to calculate profits and reveal which orders contribute most to the bottom line.

Return On Investment

Organizations often delay investing in business management systems in favor of saving money for the bottom line. But a well-integrated production and accounting system will pay back the initial investment quickly in both increased profitability for existing work and increasing orders as happy customers return again and again. Start the investigation into integrated production and accounting for your organization today.

"By leveraging the software, we've been able to scale up to meet increased demands—with no growing pains."

— Mark Carter
IT manager
SECOA Stage Equipment



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