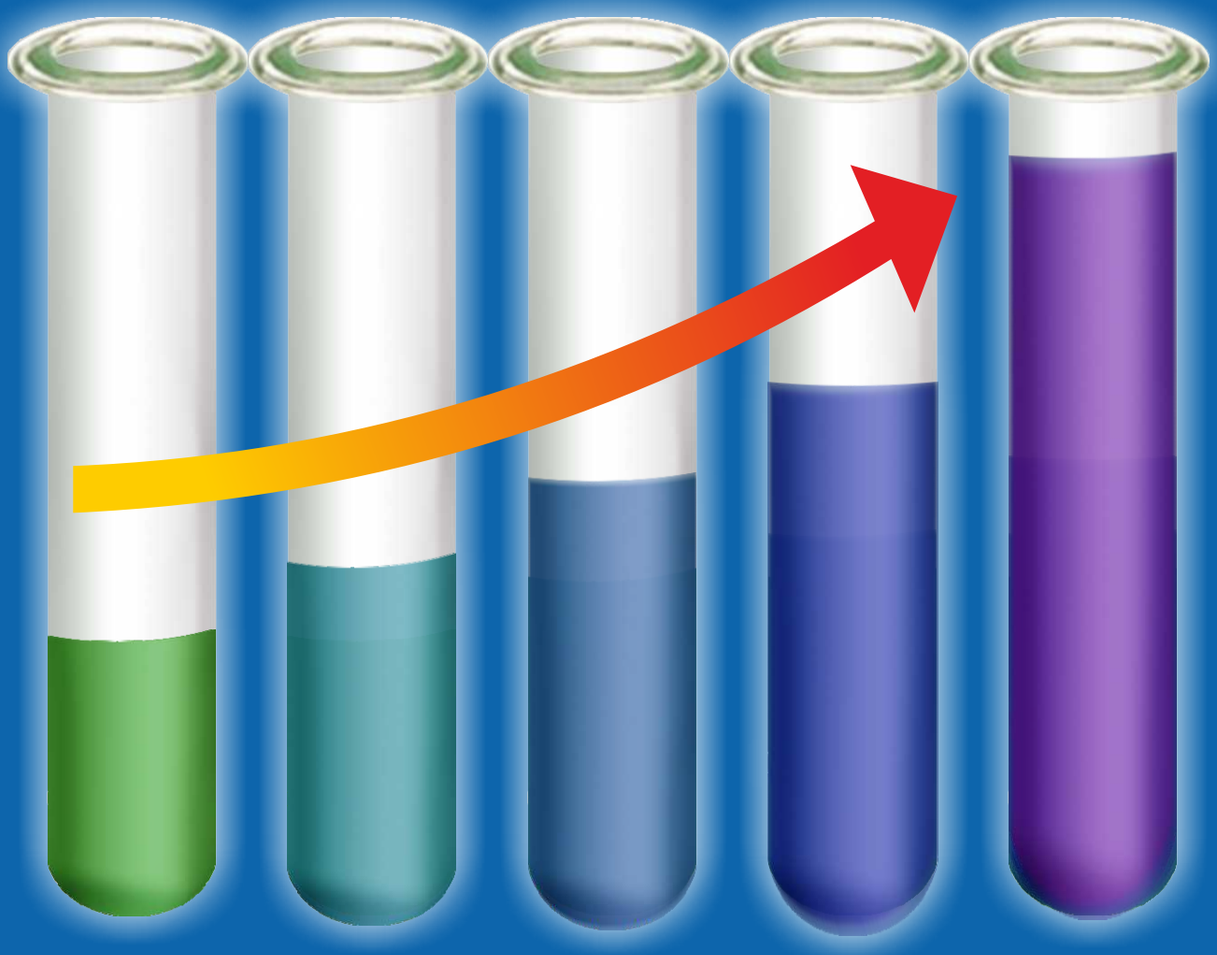
BATCHMASTER®
Process Manufacturing Software

# Return on Investment





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## Background

Process Manufacturers are not discrete manufacturers. Unlike discrete manufacturing scenarios that are often referred to as assemblies, process manufacturing requires science and skill as much as artistry and occasional guess-work.

Most process manufacturers fall into one of three categories. Large (publicly-traded) companies with constantly running operations, fulfill international demand for popular products. Medium-sized corporations, that often answer to the bank, supply a wide array of products throughout the nation. Finally, small (boutique-like) organizations rely on private funding and working capital from bank loans to meet regional demand or national niches. Though these profiles are never constant, they are often common.

Regardless of which profile an organization fits, or even if a particular profile is exact, it's important for them to employ software to manage and further their business practice. This is where the fun starts!

One of the most traumatic propositions in business today is considering re-engineering products, practices and people-skills in the midst of a tumultuous economy. For many, just the thought of making such a change can make one question their own judgment.

For decades now, companies have tried, and yes often struggled with, implementing what has come to be known as enterprise software systems. Enterprise Resource Planning (ERP) has at times brought companies to a grinding halt. The age-old wisdom around the impact of bad press is not lost on ERP, despite the thousands of companies who have successfully implemented such systems. While bad ERP implementations get lots of attention, the truth of the industry is that, when done properly, ERP implementations can bolster struggling companies, enforce stable organizations and kick-start massive positive changes in organizations prepared for these events.

So now, the question becomes “Am I ready?” In reality, the question is not one of readiness, it's one of inevitably. Also, gauging preparedness is never a one-man proposition; it must be a holistic evaluation.

## Introduction

This document is designed to help the reader understand their potential Return on Investment, or ROI as it applies to a process manufacturing ERP system. This document will provide emphasis on two fronts.

First, because numbers on a page are simply that, what follows will rely heavily upon actual customer success-stories and the numbers those customers supplied in trying to help the reader understand their improvements using ERP.

Second, you will come to know a company called BatchMaster that set out in the 1980's to promote better formula management through the use of software. Over the decades, ERP evolved to a point of affordability in the marketplace in about the same timeframe as BatchMaster grew up into a fully integrated ERP system. Most of the stories told here will be from BatchMaster ERP customers, and much of the explanation will focus on how the software solved people's problems.

## What is the Market Saying?

This document will focus heavily on materials published by the Economist's Intelligence Unit (EIU www.eiu.com). According to the EIU, the organization “provides a constant flow of analysis and forecasts on more than 200 countries and six key industries.” Their focus is to “...help executives make informed business decisions...”

In 2007, at the onset of the current recession, the EIU developed a list of activities designed to help executives make the tough decisions during this time of financial uncertainty. Throughout this document, those eleven questions will be applied to the process of evaluating ERP acquisition as a whole, and to help the reader understand why BatchMaster is the best solution available, based on their current situation.

EIU - 11 Keys to surviving the current market[1]:

- Identify core assets (people) that can contribute to competitive advantage
- Adding functionality to existing system to support growth
- Identifying customer needs as they change
- Supporting idea development to identify, assess and execute opportunities for innovation
- Providing integrated, single view data reporting for management decision-making
- Focusing on faster time-to-market, when launching new products
- Providing individual employees with role-based information that allows them to continuously innovate within their own space
- Identifying gaps in your product / service offerings that can be filled by acquisitions
- Develop more efficient processes for integration of systems of acquired companies
- Develop more efficient processes for due diligence of proposed acquisitions
- Implementing systems easily adapted to different currencies, regulatory regimes or business models

*Highland Laboratories - Mt. Angel, OR, has served the Nutraceutical and Natural Products marketplace for over thirty years.*

*As a licensed, class 1 Pharmaceutical manufacturer, private-label contractor and a distinguished brand, Highland has established a deep knowledge of what it takes to be successful and maintain high standards in this fast-paced market.*

*Like many process-manufacturers, Highland started out with a DOS-based system that was re-designed specifically for their needs. Unfortunately, this system was based on discrete (assembly) manufacturing. By the time the company was able to fully realize the limitations, the software was outdated and support was virtually unavailable.*

*What Highland did have was a wealth of individuals steeped in planning and production experience, capable of understanding the value of using software to assist in their day-to-day work.*
*For Highland Laboratories, the need for Master Production Scheduling (MPS) and Material Requirement Planning (MRP) was crucial. Highland used software to place orders and open work in their old system, but didn't have the critical planning component.*

*Important, expensive resources were often locked in time-consuming conversations over just how much to buy and how soon, in order to meet customer and forecast demand. Purchasing Manager Michelle Bruner says, "(now) I don't have to worry about the production schedule or incoming sales orders. BatchMaster gives me the confidence to do my job without worrying about what's going on elsewhere."*

## Who is BatchMaster?

BatchMaster Software Inc. is the leader provider of software designed specifically for process manufacturing industries. With a history spanning over twenty-five years and over 200 employees on staff, BatchMaster continues to be the innovator in the batch-process manufacturing space.

According to Dr. Sahib Dudani, BatchMaster President and C.E.O., "We measure our success by the number of organizations we help to improve both their manufacturing and distribution operations. Our customers can rely upon the BatchMaster team to be a partner in productivity."

Today, BatchMaster ERP customers come from all sectors of the process-manufacturing industry and all corners of the globe. BatchMaster's customer list includes food manufacturers whose products you see every week in U.S. supermarkets and chemical suppliers in the Far East. BatchMaster customers grapple with issues like regulatory compliance, contract-manufacturing, allergen management and export documentation. These issues are as disparate as the industries from which they are born. But because they share the commonality that is recipe / formula management, BatchMaster is able to meet all of their requirements.

## What is ERP?

Enterprise Resource Planning started with planning systems. Most experts agree that ERP began as a result of Material Requirements Planning (MRP) systems being integrated into more common business solutions like sales order entry, contact-management, and Master Planning (MPS) solutions for production planning.

Around 1990, when ERP first became recognizable, only the top tier of manufacturers and distributors were able to afford the cost. Even companies with limitless resources didn't have the human capital or time to implement ERP. Because it took thought and planning to map software to business practices, starting ERP without said planning meant almost-certain failure.

### ! The good news is that it's not your father's ERP anymore

Enterprise Resource Planning today touches all of your organization, not just a few departments. ERP's cost has morphed from expensive to surprisingly affordable. Finally, the broad-spectrum of specialty ERP systems, servicing individual industries or business sectors, have drastically reduced the time and thought required to get it (implementation) right the first time.

In today's ERP market, companies with an Internet browser can easily identify at least three to four software companies that have developed a system for companies like themselves. Detailed conversations with the software vendor and their customers from similar industries help narrow the field to at least one or two vendors in the "sweet spot."

## Purpose

This document is designed with a conversational approach to evaluating the true nature of an ERP system, the pitfalls of selecting and implementing ERP and whether or not your company is suited to making the move to a fully integrated enterprise software system.
Because choosing an ERP solution can be daunting and often times tedious, there are a few questions that you should ask at the outset.

## • Why is now the best time to think about ERP?

Most companies fall into one or both of these categories in today's marketplace:

**- Business is slow now, and we might be able to utilize our time to improve process, products and people skills**. Today might be just the right time to use ERP to identify which products are making and losing money, which production units are most costly and what training is available, and which employees are capable of obtaining and applying training.

**- Money is tight right now, and it's hard to get credit.** Surprisingly, applying the principles from the first scenario can be helpful in loosening the bank's coffers. Those who use ERP today can often attest to scenarios where reports generated by their ERP system have been evaluated by their bankers. While investors and bankers are impressed by reports of a business' bottom-line, they are equally swayed by proof of practice evaluation and constant fine-tuning of processes.

## • Where can ERP benefit me?

Typically, ERP solutions cover the following core functions:

### - Demand Management

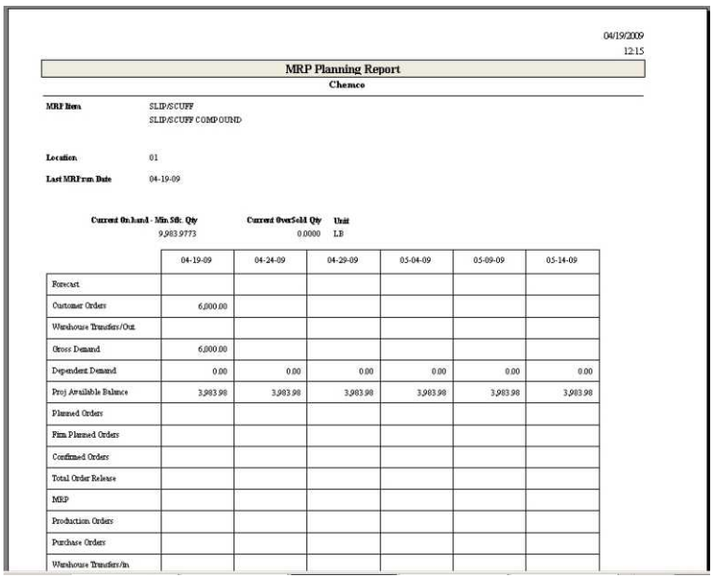
Sales Order Entry is just the beginning of how ERP can assist in the process of managing customer demand. While "off-the-shelf" software packages allow the ability to capture input of orders that consist of existing part numbers, more sophisticated solutions can be tied to product management. Implementing ERP in managing order-entry to product release reduces the amount of time landing new customers, pleasing existing partners and measuring the success of product campaigns. Beyond capturing an order and developing new product, Demand Management refers to your ability to project sales, at the SKU (Item) or Product Family (group). More sophisticated solutions, such as BatchMaster ERP, include multiple long-term and short-term forecasting models, with system recommendations and the ability for planners to adjust and document the plan.

### - Purchasing

Entering a purchase order into an automated system is a huge advantage over a paper-based "fax-it-in" approach. Just getting the order into the system guarantees that shipping will see which orders are legitimate, which delivery quantities are accurate, and what charges are expected and incurred.

Once Demand Management (above) is implemented, purchasing can leverage that information in Material Requirements Planning (MRP), which is the cornerstone of ERP.

Knowing how much will be produced in a period allows planners to define purchasing windows, economic order quantities and min / max stock levels. More importantly, if your planners can view buying cycles far into the future, they can make better (contract) agreements with your partners. Thorough planning systems, like those provided by BatchMaster, will include Material Requirements Planning (MRP) modules that automate this process.



04/19/2009
12:15

**MRP Planning Report**
**Chemco**

**MRP Item** SLIP/SCUFF
SLIP/SCUFF COMPOUND

**Location** 01

**Last MRP run Date** 04-19-09

| Current On-hand - Min. Sfk. Qty | Current OverSold Qty | Unit |
|---|---|---|
| 9,983.9773 | 0.0000 | LB |

| | 04-19-09 | 04-24-09 | 04-29-09 | 05-04-09 | 05-09-09 | 05-14-09 |
|---|---|---|---|---|---|---|
| Forecast | | | | | | |
| Customer Orders | 6,000.00 | | | | | |
| Warehouse Transfers/Out | | | | | | |
| Gross Demand | 6,000.00 | | | | | |
| Dependent Demand | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Proj Available Balance | 3,983.98 | 3,983.98 | 3,983.98 | 3,983.98 | 3,983.98 | 3,983.98 |
| Planned Orders | | | | | | |
| Firm Planned Orders | | | | | | |
| Confirmed Orders | | | | | | |
| Total Order Release | | | | | | |
| MRP | | | | | | |
| Production Orders | | | | | | |
| Purchase Orders | | | | | | |
| Warehouse Transfers/In | | | | | | |

### - Finance

Finance is usually considered a "given" in selecting an ERP partner. While it's assumed that any financially-based system includes a General Ledger solution, that's sometimes the only commonality between software vendors.

ERP systems (for process manufacturers) will include intricate financial calculations for the loss, overage (re-work) and overhead that occur in the manufacturing of recipe / formula-based products. While labor, to some, is a generic calculation made on a yearly basis, other manufacturers are billing customers by the piece or pound, and need an accurate accounting of line labor to know if a project is making, or will make, margin.

### - Production Management

While most “off-the-shelf” packages allow the definition of a Bill of Materials, they are limited to that alone. A discrete manufacturing package will sometimes work backwards to re-tool their systems to support formulation, they often fall short.
True process manufacturing solutions can cut significant time and efforts by expediting or planning production, based on demand. In a perfect world, the time spent working up product orders disappears, when planners' software tools can understand the relationships between finished products, formulations, intermediates, raw materials and Units of Measure (UOM's).

## Process-manufacturing solutions should additionally include:

### - Product Development

Recipes and formulations are at the core of your business. Why wouldn't you want that at the core of your software? Formula management must include the ability to design a line-item formula, with manufacturing and testing instructions in sequence of production.

Formulas cannot be developed in a vacuum. The costs, quality and physical properties associated with formulation must be visible at the point of use. If products are too toxic, too expensive, or too unhealthy, they shouldn't make the cut for production. Making sure corporate standards for cost and quality are electronic and automatic saves time. Most companies know the time it takes for formulas to be created as well as approved by the company and customer(s). Reducing the time new products spend in the in-box (moving through approvals) is an easy way to begin ROI calculations.

Because formulators often work in small batch sizes, the system they use must be able to inspect a BOM at the point of production, and size the work accordingly. If planners have to evaluate every production order to back-solve their work schedule, valuable time and expertise is wasted. Good planning systems free up expensive resources for more important (revenue generating) work.

### - Quality Control

While less sophisticated software solutions say they support quality control, that's not necessarily the case. Simply allowing users to attach documents at convenient points within the software system is not enough.

By implementing QA / QC standards during product development, users can ensure that those standards are prevalent and mandatory during production, packaging, shipping and even post-delivery. Process manufacturers engage in quality control at the point of raw materials receipt and during production, inspections prior to delivery and evaluation of a product's stability while in the field.

Making these practices automated and mandatory presents a number of cost-saving opportunities. By reducing the amount of time taken to complete tests and get them signed-off, adopters maximize some of the most expensive human resources in the company.

Combined with the ability to avoid costly product recalls, the quality controls available in Process-ERP solutions represent their largest tangible and potential cost-savings.

### - Compliance Documentation

Most process manufacturing operations require compliance documents to get their products to market. Many of these organizations employ compliance officers, or divide high-level resources' time amongst these and other tasks.

Compliance requirements can come from more than one source. While most governments require documentation to move potentially hazardous materials, that only represents a small piece of the overall puzzle. Customers often require Certificates of Analysis and other data related to the physical / nutritional / ingredients composition of any bulk, finished product or even a product's intermediates.

Time spent in typing a CoA or writing a compliance specification is time wasted. Good ERP systems, focused on process, will eliminate the need for manually generating these documents. Because sales are linked to product development and in turn production / packaging, documentation need only require the push of a button.

### - Advanced Planning

While MRP and MPS are the cornerstones of ERP, they have been enhanced by a new, next phase of solutions rooted in these original planning practices. Once a sales, purchasing and production plan are in place, APS provides the ability to "white-board" new ideas with electronic solutions that can back-solve data to the original planning systems.

Once planning is no longer a conference room activity, a number of time and cost savings present themselves. Travel expenses required to bring people together are eliminated when planning can be easily exposed over the network or Internet. Routing new plans through the approval process is a thing of the past, when everyone is able to view the plan and make adjustments in real-time.

## ● Do we know what we want?

One of the most common threats to successful ERP implementations is uncertainty. Most companies enter into ERP implementations with only a handful of individuals, sometimes one or two, who have experience in using or implementing ERP systems. Unfortunately, most companies don't know what they need until they are already implementing software.

Often, companies engage third-party organizations to assist them in this process. Though these services can provide added value, they are generally based on templates and not necessarily industry expertise.

By selecting the right partner for ERP, companies can mitigate their exposure to these types of pitfalls. Having consultants who know which questions to ask is important, but that's only half the equation. Making sure your ERP vendor has already encountered most, if not all, of your challenges is critical. Knowing that the software you're purchasing addresses those core issues is key.

Time spent making decisions about which modules to use, how to configure them, and what to implement at each phase is an inevitable part of the process of acquiring enterprise software. If your vendor of choice has asked the right questions, the answers to those questions will dictate system settings and implementation schedules. Having knowledgeable consultants asking those questions will ensure that your system comes alive quickly and effectively. Making sure it's done right the first time is an invaluable savings over start-and-stop implementations.

*"BatchMaster's consulting team... did an excellent job of listening to our requirements and configuring the system to do exactly what we wanted."* **Bill Pashka, Director of Operations, House-Autry Mills.**

*"We implemented BatchMaster in less than six months, and already had the results to pay for it."* **Richard Northcote, Controller & Ops. Mgr., Madison Chemicals.**

## Surviving the Current Market

So, by now, you should have asked yourself those few basic questions, as to whether or not you can afford not to make a change, and if your organization is capable of moving forward.

Hopefully, the answer to these question is evident, and you're ready to start looking at how that list of survival techniques from the Economist's Intelligence Unit can be applied to your organization through the effective use of ERP.

## Understanding the Economists Intelligence Unit's approach


The eleven questions that follow will take much of what has already been discussed in this document and focus it on people, practices and professional experience. Because these areas are so intertwined, they must be evaluated much like a KPI, drawing the essence of your management measurement from multiple data points.

**People -** are your most valuable asset. The knowledge and experience they bring to bear on an ERP implementation cannot be underutilized or underestimated.

**Practices -** include both the methods and vehicles you use to conduct business.

**Professional Experience -** is the measurement of expertise amongst your workforce, to determine the path of least resistance and most likely success.

## Surviving the Market: Identify core assets (people) that can contribute to competitive advantage

Often, employers divide their labor into two categories, skilled and unskilled employees. When evaluating ERP systems, this paradigm changes slightly. Frequently, employees you consider skilled, consider themselves too much so to be bothered with systems other than those they've developed for themselves. Equally, stars emerge from the unskilled workforce with a real aptitude for systems and new technology.

Forget about what language an employee speaks, because most good systems are multi-lingual. Don't be bothered by the age of your employee, because their flexibility in learning and aptitude for absorbing change are far more significant.

### - Who can successfully use ERP?

Everyone can successfully use ERP; the question is " Who is willing to learn ERP?" A serious undertaking is necessary to evaluate which employees will drive this new generation of your organization. Picking the right leadership is your first step. Most departments have what is kindly referred to in the industry as "Islands of Information." These are the individuals who are critical to their department and to your organization. These individuals are best suited to receive training from your ERP vendor as well as help develop the system settings during your initial conversion to ERP.

Getting buy-in from core individuals is key. If reluctance or timing are hindrances to their participation, you may want to indentify a protégé or eager participant you can elicit to work closely with a department's key individual in order to extract their opinions and apply their expertise.

The failure to elicit this intellectual buy in and apply the knowledge gained during implementation is a common and critical error of ERP adopters. Having an individual on-site with expertise on each department's use of the application reduces the amount of time with "start-and-stop" implementations, because you are more likely to get things right the first time. Making sure you retain those individuals post-implementation ensures that your first line of support resides in-house, on your schedule, and answering directly to management.

### - Which planners understand the principles of Advanced Planning?

Material Requirement Planning is not new. The early principals of this practice were developed in the 1960's. Software systems have been automating MRP since the days of DOS-based systems. Master Production Scheduling (MPS) is merely a front-end to MRP, taking demand and weighing that against the manufacturing rules of the organization. If we start work on Monday, and complete work on Friday, how will we meet the schedule of demand from our customers and forecast?

Most organizations have at least one qualified individual who understands these basic principles, and can be trained in the use of an automated system. Typically, making manual calculations that include demand, forecast, capacity of lines and work schedules is time-consuming.

PayScale, Inc. is a market leader in global online compensation data. With the world's largest database of individual employee compensation profiles, PayScale provides an immediate and precise snapshot of the job market. Using PayScale, a study of average salaries paid to manufacturing planners identified an average salary of $65,000.00 per year. That's an average hourly rate of $31.25 per hour.

Considering that planners' time is primarily spent entering data into spreadsheets and making mathematic calculations, it quickly becomes clear how ERP can benefit your planning department. Most automated planning systems are configured to run in off-peak hours, processing large amounts of data in just seconds. Planners are then left with tasks more suited to their wage, like combining projects, fine-tuning the labor schedule, managing maintenance and maximizing capacity.

Simply stated, the time your most-valuable employees spend creating and managing spreadsheets today is time wasted. If your staff has the skills to design the spreadsheet formulas to support their department, they can help you implement

Advanced Planning. Employees capable of translating the output of data from spreadsheet-based solutions are then just as capable of reviewing a Master Plan devised by your ERP's Planning Modules. Which is the more appealing scenario: salaried planners tinkering with spreadsheets or applying their expertise to optimizing processes and practices?

In a study conducted by APICS and Clemson University, the ratio of individuals necessary to facilitate customer orders is drastically reduced as a result of Enterprise Resource Planning system implementation. Taking into consideration that expeditors come from planning, production and warehouse management, consider the impact of applying these reductions evenly across the enterprise. That would supply the average organization with a 4.7 person reduction in expeditors. Considering that expeditors are typically drawn from planning, warehouse management and purchasing, that would equate evenly to a 1.56 person reduction in the planning department. Whether your organization chooses to take advantage of the staff reduction or simply reallocate these valuable resources to revenue generating activities, the savings of ERP implementation are tangible.

| Metric | Pre-ERP | Current | Future |
|---|---|---|---|
| Inventory Turn-Over | 4.5 | 7.9 | 11.2 |
| Lead Time (Days) | 55.6 | 41.7 | 31.8 |
| On-time Delivery % | 73.9 | 88.6 | 94.6 |
| Order Splits % | 29 | 13.5 | 21 |
| No. of Expeditors | 10.8 | 5.1 | 2.1 |

*Source :APICS Journal (Clemson)*

### - Which finance employees are trained on more than one system? What are those systems?

Most companies hire individuals who have experience, when possible. Take the time to survey your employees as to which systems they have used in the past. Though this isn't a roadmap to which system you should choose, it is an indication of the experience level of your current resources.

Since so many solutions require integrated finance and manufacturing packages, understand the full spectrum of solutions available and then compare that to what your employees have used in the past. Ask your employees their experiences with past systems in learning, using, and tracking data with, these systems.

Once you've gathered this information, you'll be better prepared to identify the leadership necessary to guide each department. Those who have used more than one financial or (process) manufacturing system are likely prime candidates to either lead or assist in the implementation of the system and training of the staff. Time spent in implementation is valuable, so employees who've participated in ERP previously will likely help speed up the process. Individuals who have helped mold financial implementations will be less likely to linger on detailed decisions that could put the unexposed into a quandary.

### - Which warehouse employees are experienced in wireless systems?

Warehouse Management Systems (WMS) are invaluable tools to the companies that utilize them. Inventory accuracy numbers, like those from the earlier Clemson Study are easily attained through the use of WMS. Without ERP, hand-written errors can plague inventory accuracy. With ERP, keystroke error is still possible, if the system is not configured to flag obvious errors. WMS systems, which can integrate to sales, purchasing, warehouse movement, production and even quality control, offer endless opportunities for cost saving.

By reducing the time spent moving throughout facilities, WMS saves man-hours. Consider the difference between an individual who goes to the dock, receives an order, travels to their desk to look up that order in a notebook and then manually process the paperwork. How much time does that consume in your organization? Now imagine a scenario where a shipment arrives, is scanned and verified, and the system tells the user exactly where to place the items in the order. Meanwhile, QC Hold labels and product tags automatically print nearby, and those responsible for testing are notified of the items arriving. Follow that thought to stocking, production, put-away and sales picking. How much time will that mean to your company? How much more accurate will your inventory records become using this type of system?

Let's take a simple example, based on the APICS / Clemson study from above. Consider a medium-sized company with $25m per year in sales and 10 percent inventory investment. Using the number from the study, what does that mean to our example company with. $1.25m in average standing inventory.

| Metric | Pre-ERP | Current | Savings |
|---|---|---|---|
| Inventory Turn-Over | 4.5 | 7.9 | $425,000.00* |

* Based on ten percent improvement on $1.25million Inventory holdings and 3.4(x) reduction of inventory turns.

Though few companies are ready to implement WMS on day one of their ERP experience, it's probably the most important Phase II or Phase III decision you will make.

Again, take an informal survey of your current warehouse staff to determine if they have used WMS systems in previous roles. Get an idea of the time and effort that those systems freed up and the level of data accuracy that WMS solutions add to inventory controls.

*Raining Rose - Cedar Rapids, IA manufactures natural body products and soy candles. The company relies heavily upon BatchMaster ERP and their handheld (wireless) extension, BatchMaster Mobile, for many of their daily processes. Controller, Judy Luben says, "Poor inventory accuracy was affecting our customer service." Luben goes on to state, "We recently implemented BatchMaster Mobile. (now)… we're light-years ahead of where we were."*

*BatchMaster Mobile provides powerful warehouse management capabilities, integrated directly with BatchMaster ERP's purchasing, production sales and inventory modules. BatchMaster Mobile is also the perfect solution for automated generation of critical business documents from anywhere in your facility.*

*Users can print any number of receiving, shipping or inventory documents or labels to standard or thermal-label printer throughout the facility. Additionally, generation of compliance documents like Certificates of Analysis (CoA), Bill of Lading, (BoL), Material Safety Data Sheets (MSDS), pallet labels and others are automatic.*

*In the past, companies like Raining Rose struggled to amass the information and resources necessary to complete these compliance documents. Today, with BatchMaster Mobile, Raining Rose can access them instantly from anywhere on-site or via a Windows Mobile enabled device.*

*Though many ERP vendors offer Warehouse Management (WMS) Solutions, few are attuned to the needs of customers handling formulas, expirations and complex compliance scenarios. Judy Luben explains, "We chose BatchMaster because it was designed for process manufacturing and it was the best fit for our inventory management requirements."*

### - Who has used EDI in the past?

EDI represents another important “add-on” decision in the calculation of your ERP Return on Investment. In many industries, popular retailers are more inclined to do business with manufacturers who are prepared to electronically exchange information with them, as opposed to engaging in the typical buyer / customer service interaction.

Electronic Data Interchange is an evolving technology that has been around for many years. Initially, EDI required subscriptions to expensive networks of dedicated bandwidth and security technology, and significant hardware investments to support the interchange. Much like ERP, EDI has evolved in technology and price over the years. Subscribers are now able to access these partner networks through more user-friendly systems that are familiar to users of web-based systems.

If you talk to your employees, you'll likely find at least one who's used a web-based system to replicate information, by pulling down customer orders and updating order status between systems. Ask them what types of customers were won by offering this type of partnership.

How much new business could your company lure if you were able to sell successfully to the top tier retailers in the marketplace? How much time would you save automating this process? With the cost of automated EDI, and web-based systems nearly equal, in the long run the question becomes “Why not?”

## Surviving the Market: Adding functionality to an existing system

This exercise takes into consideration which extensions are available from your potential ERP vendors and weighs that against long-term multi-phased opportunities. Most ERP systems will offer some of these solutions, but not all. It's important to evaluate your long-term aspirations to ensure that your technology decision supports your plans for the future.

### - Can we benefit from WMS?

As described above, Warehouse Management Systems are invaluable tools to the customers who chose to implement them. Time saved and accuracy attained are easy markers for your Return on Investment.

The question then becomes, “Where is it best utilized?” Will you look for a full-blown system with label printers and redundant technology throughout the facility, or is there a more strategic implementation available in the short-term?

Many organizations choose to start small with WMS. One or two routers used only at the docks could significantly reduce mistakes made by temporary or entry-level employees, at minimal investment. Because licensing is modular, this is an attractive first step for customers implementing ERP for the very first time.

Other companies, who choose to wait, often make large sweeping replacements of workstations for the lighter, portable handheld units utilized by most WMS systems. In a perfect scenario, employees charged with receiving, warehousing, production and even quality are able to unleash themselves from desktop access to ERP. This makes employees more agile, saves time and movement and promotes accurate record-keeping.

### - What can Demand Planning do for us?

Demand Planning is a broad-based term for what at one time was simply referred to as forecasting. As part of a Supply Chain Management / Advanced Planning practice, Demand Planning refers to the projection of finished goods, work-in-process (WIP) / intermediates and raw materials required in any predefined stage of planning.
Typically the tenants of MRP and MPS are applied to a larger Supply Chain Management model, under which forecasts are multi-level and multi-location.

Initially, Demand Planning, or forecasting solutions were mostly developed independently of ERP, choosing to connect to any “system of record.” In this model, the forecasting system was responsible for extrapolating forecasts from sales data and feeding back projections to the host system.

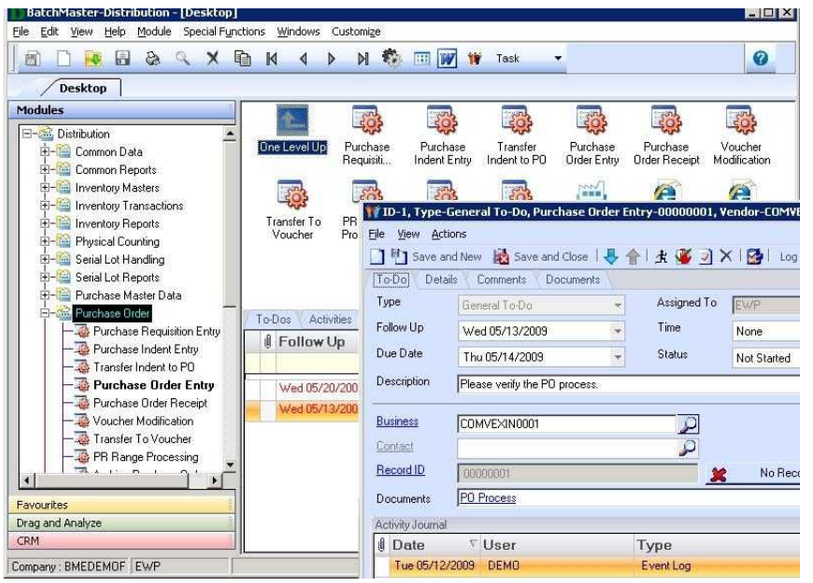
Because of the nature of Supply Chains however, it's important to make sure that your “host” system has a strong relationship with your Demand Planning solution. Making sure those things like throughput and scheduling are considered in “finite planning” scenarios is critical to ensuring accurate forecasts for production and purchasing. While good systems include both finite and infinite planning modes, the likelihood is that infinite planning will be used for long-term, what-if planning and finite planning will be applied to near-term planning horizons.

## - How can CRM benefit the bottom-line?

Customer Relationship Management or CRM began as contact management software. As the software and industry matured, the features of contact management morphed into CRM. Unlike contact management, a full CRM system has the ability to capture prospect and customer data, measure the success of new projects and / or campaigns, and help measure where to focus efforts and resources in the future. Areas where improvements can be achieved are:

- Developing better communication with partners
- Collecting detailed customer and sales data
- Creating detailed profiles like customer preferences
- Delivering distributed information to the enterprise
- Identifying new product development and sales opportunities

Successful CRM implementations are coupled with ERP, to ensure that sales data is captured in real-time and reporting is accurate and up-to-date. Likewise, data is captured in purchasing, so that interaction with vendors can be tracked and leveraged in future transactions.




Later, this document will explore how CRM coupled with Business Intelligence can facilitate more sophisticated scenarios. Just know that having a system that can capture customer requests and feedback, as well as the results of sales cycles and purchasing cycles, provides executive oversight beyond the constraints of sales reporting. Here's an example (in BatchMaster) of CRM integrated into daily functions of a purchasing agent.

Most process manufacturers also run into one or both of the following scenarios. Often times, a process manufacturer will provide “Field Services.” Whether Field Services refers to the application of product at the job site, the maintenance of equipment provided as part of the sale or simply response to customer complaints, there is a need to track and account for these types of calls. CRM provides many customers with the core functionality they need to place and log requests, then view their outcome.

In a second scenario, many process manufacturers have Customer Service Representatives (CSR's) who are responsible not only for sales, but receiving, logging and sometimes responding to issues reported by customers or end-users of their products. In industries like supplements, vitamins and cosmetics, government regulations mandate that reported issues are logged and responses are tracked. CRM allows administrators to create their own classifications of issues reported and acceptable within their own system. This reduces the amount of time spent identifying issues in both field service and issue reporting and then expedites the time identifying fixes or resolutions in response to issues.

Good CRM systems are easy to cost-justify, especially when integrated directly with a company's ERP solution. Cost reductions are typically seen in:

- Time spent identifying issues
- Time spent deciding on responses
- Time saved reusing previously approved responses on new issues
- Costs of double-entry of customer data in contact management and sales order process
- Higher percentage of cross-selling
- Less effort and greater visibility in new sales opportunities
- Improved customer service
- Higher customer retention

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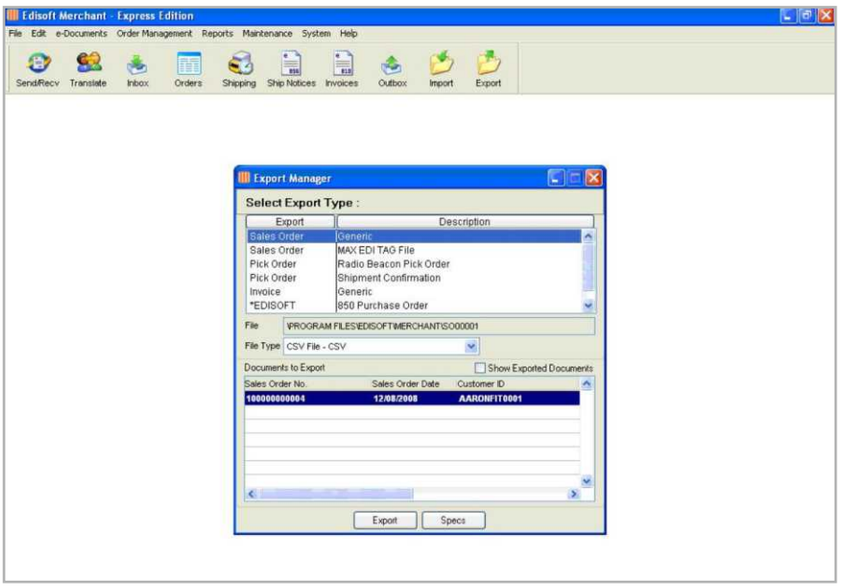
## - Can we successfully use Advanced Planning Solutions?

Advanced Planning solutions, like Demand Planning (from above), Advanced Production Scheduling (APS), Material Requiremenst Planning (MRP) and Master Production Scheduling (MPS) can be used in stand-alone modes, or as a product family. So now, your company needs to ask... “Are we ready, and what for?”

Once sales demand is placed on an ERP system, the flow of data to Advanced Planning is basically automatic. Yes, Demand Planning will require some historical data to get reliable forecasts. Manufacturing lines and their capacity should be defined (in ERP) to get the most out of MPS and APS. Production and purchasing windows (time-fences) must be created to extract accurate recommendations for purchasing.
By spending the time to verify these parameters (internally), and conveying them to your ERP consulting team, ERP adopters are able to maximize their investment in the solution. Time is saved in manual planning, exposure is reduced in areas like allergens and toxin, machine maintenance and handling equipment down-time are easily optimized.

## - Are there additional opportunities using EDI?

EDI makes the exchange of data with your partner much easier for the partner, and certainly makes you more attractive as a supplier. Unfortunately, you've committed to the double-entry of sales data, simply to attract new business. Is the cost of double-entry factored into the profitability of the project? Are you making as much money as you think you are through this new EDI offering?




What most companies don't know is that good ERP systems are partnered with the EDI VANS (Value-Added Networks) and their partners. Data entered into your customer's purchasing systems can automatically appear in the sales orders in your ERP system. Projected delivery dates generated by your ERP system can appear in the systems of your partners. Dispatches leaving your warehouses will be reflected in the logistics systems of your customers. All of this can take place automatically, with detailed reports to track the accuracy of the interchange.

Good ERP solutions, like BatchMaster, provide the best of both worlds, EDI interchange, and automated updates. Adopters can harness new opportunities in the marketplace, with minimal set-up and investment. You company's cost of winning large-scale accounts is limited to the time spent adding their customer information and selecting the VAN to which they subscribe. Once in place, the need to take phone or fax orders disappears, and the time saved on these processes can be added to your bottom-line and used in calculating your ERP savings.

## Surviving the Market: Identifying customer needs as they change

### - Eliminate SMP's

SMP's, or Slow Moving Products are items who's underperforming Average Rate of Sale (ARS) exceeds outliers of an item's Historical Rate of Sale (HRS). In short, a company should be able to easily identify when products are so unpopular, or dwindling in demand, that they violate basic company rules for identifying such situations. Good planning systems give users the ability to define and identify these SMP's.

So that begs the question, “What do we do about it?” Your company can use ERP and Demand Planning to set these parameters, measure sales performance and quickly adjust the forecast to trend these products off the catalog. If an organization relies on manual inspection to identify these situations, two things can occur.

First, the likelihood that someone will look at these scenarios across the entire product catalog, on a monthly or quarterly basis, is unlikely. Cost accounting alone takes some companies weeks of each calendar year. Now imagine double that time to include examination of sales trends as you are costing.

A second scenario to consider is how much impact will an SMP have on overall inventory investment. Take for instance a single product family in a larger product family. If the product represents 1/100 of a $1m. catalog that means it represents $10,000.00 in inventory investment. If SMP's are evaluated manually each quarter, it would take three months to identify the problem. Meanwhile, either manual or automated planning systems will have already transferred that demand into the time fences that make up MRP and MPS (purchasing and production planning). If production and purchasing are planning thirteen weeks in advance, that's over three more months of purchasing that either needs to be cancelled or is already en-route.

So in the last scenario, an item that could have been removed from the catalog in just 30 days time remains available for 90 days. Meanwhile, buyers and planners are making room and agreements for another thirteen weeks of purchasing and planning that may even result in expired inventory.

Finally, because that item is part of a product family, Advanced Planning can help identify where to re-allocate resources. If our example item has raw materials common to the rest of its product family, customers can be routed to similar products from the same family, while raw materials on order can contribute to the production of like products, instead of that inventory expiring on the shelf.

### - Identify New Trends?

In Demand Planning, the flip-side of identifying Slow Moving Products is the ability to spot new trends on the horizon. Demand Planning provides users with graphical representations of projected growth, based on the length of history and mathematical model selected. Visual clues quickly alert users to the trends. In conjunction with sales, planning can help spot these trends, use CRM to track potential new projects, and adjust the projections for that item or family of items.

## Surviving the Market: Supporting idea development to identify, assess and execute opportunities for innovation

### - Capture innovations electronically

Advanced ERP systems, like BatchMaster support the input of new product formulations, along with their costs, physical properties, handling instructions and quality constraints.

Often times, process manufacturers' product developers complain that the practices started in the lab rarely make it through to production intact. Customers can require specific active ingredients, or compliance officers can set toxicity tolerances that must be conveyed to those responsible for production. As companies grow and expand, manual systems are no longer an option. In this scenario, spread-sheets and email often take over for paper and inboxes, but the processes are still unreliable, inefficient and quite frankly dangerous.

Consider the cost of a single recall, or the loss of a single customer. Perhaps your concern is with auditors determined to ensure that you comply with federal electronic signature requirements. What are the costs associated to these scenarios?

*Cosmaceutical Research Labs - Surrey, B.C. provides liquids, lotions and creams to the cosmetics and pharmaceutical industry. Their ability to understand their inefficiencies and improve operations has increased drastically with the implementation of BatchMaster ERP.*

*Because CRL utilizes BatchMaster ERP in every aspect of their business, they are able to quickly assess areas where improvements can be introduced. CRL uses BatchMaster to capture formulations at their point of entry, define parameters for testing at the project outset, manage production, measure compliance and then identify loss.*

*Controller, Ruth Ghuman explains, "Before BatchMaster, we used a spreadsheet for recording raw material. We only recorded what we had on-hand and then ordered more when we ran out." Though the company's products were high-quality and complex, their processes were simplistic and inefficient. Today, Ghuman goes on to say, "We use BatchMaster for all aspects of our business, from when we first enter a formulation, right through to when a product leaves the facility."*

*As a result, BatchMaster has enabled CRL to produce mock recalls of products in as fast as sixty-seconds, far surpassing the FDA's requirement of four hours.*

*Ghuman goes on to say, "Lot tracking is an integral part of our business. Before BatchMaster, we used spreadsheets or custom applications and it was very time-consuming having to jump from one application to another. We are very confident with BatchMaster's lot-tracking capabilities.*

*With BatchMaster, not only is this time eliminated, but the automatic generation of customer recall letters (via Microsoft Word) is automated as well.*

### - Measure inefficiencies in manufacturing

Process manufacturing is rarely an exact science. Look at the tests that quality control runs on the production formulas at the end of a run. There's almost always a variance between the lab formula and the production formula. Whether it's taking more water to clean a vat or less of an expensive raw material to get to a target goal, these are opportunities for process improvement. It's important for the system you choose to have the ability to include your baseline expectations, capture the reality of production and measure the variance of positive and negative events in the process. If these events are significant, or repetitive, then you must assess their viability. Can you combine production runs to optimize loss? Is there a more efficient variant of a base formula you could use? What are the cost and quality implications of switching to a different supplier of raw material? Good process manufacturing ERP systems will include the data-entry points, production recording utilities and reports to accurately identify, assess and re-work these processes.

### - Identify and improve high-profit products

Most companies will base their formula or recipe on a Standard Cost, which is updated on a yearly basis. Sometimes, they will use the Average Cost of existing inventory at the time of production. Either way, that may not provide a holistic picture of which products deserve your greatest attention.

What if a Standard Cost formula has a drop in raw materials cost? Do you want to wait until the end of the year, to realize that you should be pushing the sale of this formula in Customer Service? What if you are currently selling a popular product, that could be much more profitable in a different package? Only by complex calculations would a typical manufacturing organization come to these conclusions. In ERP, these types of assessments can be made in mere seconds. Costing utilities can be run in trail mode to identify savings mid-year, allowing sales to maximize on high-profits, while maintaining the Standard Cost. Product Cost Analysis can be applied for a single formula / recipe to multiple packaging options, plugging in theoretical line costs and margin, to determine the best Bill of Materials for your bottom-line.

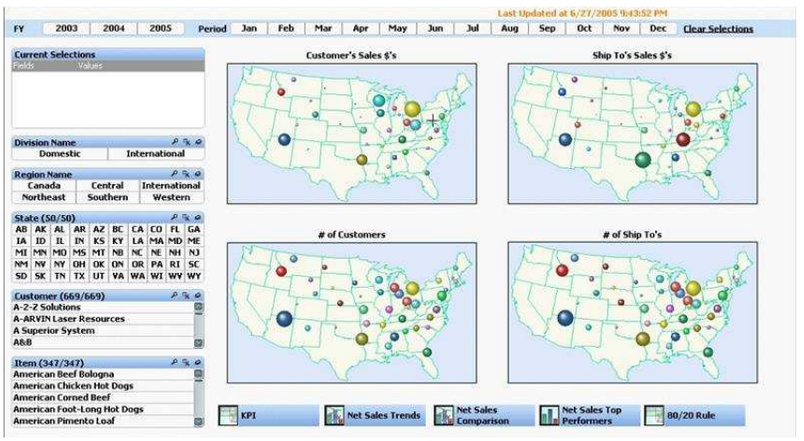
## Surviving the Market: Providing integrated, single view data reporting for management decision-making

### - Leveraging templates in Business Intelligence

Since early in this decade, the notion of relating multiple data sources into a single view has grown in popularity, feasibility and affordability. This practice has taken on many early names like Cubing to Business Process Management (BPM), Data Mining, Data Warehousing, Business Intelligence and most recently, Business Analytics.

A 2005 Article, from Technology Evaluation Centers (Mukhles Zaman) titled 'Business Intelligence, It's 'In and Outs' the author explains that, “BI is neither a product nor a system. It is an umbrella term that combines architectures, applications, and databases. It enables the real-time, interactive access, analysis, and manipulation of information, which provides the business community with easy access to business data. BI analyzes historical data - the data businesses generate through transactions or by other kinds of business activities - and helps businesses by analyzing the past and present business situations and performances. By giving this valuable insight, BI helps decision-makers make more informed decisions and supplies end-users with critical business information on their customers or partners...”

So let's go back to the beginning, “Cubing” is a term initially borrowed from literature. A student writing a paper would take a Cubing Strategy in order to approach writing from multiple perspectives. More accurately, Cubing Strategy was the analysis of various aspects of a topic, creating a visual representation.




In software, and in business application, Cubing took on that same analytical model, but for complex business issues. Let's look at an example. If a company wished to measure their success in Customer Satisfaction, there would be multiple sources from which this number (%) could be derived. On-time delivery is normally something customers would notice. Price commitment is another key factor when surveying customers. Perhaps, a company would like to consider the number of orders or re-orders of a product to somehow factor into their customer satisfaction. All of this data exists in an ERP system, and can be easily extracted with the right tools.

As the idea of cubing ERP data evolved, it became better known as Business Intelligence (BI). BI became the fancy name used by software vendors who packaged up templates of the cubes of data into attractive marketable graphs, charts, stop lights and thermometers (visual representations), used to better relate the metrics of Business Intelligence to the end-user. Moving to “in-memory” technology, these systems typically allow companies to set the parameters or weights of what defines each Key Performance Indicator (KPI) of BI, and select the visual elements to display each KPI within each department's dashboard and refresh that data regularly. Some KPI's are more simplistic indicators drawing from one or two sources, however having them graphically represented provides executives with visual indicators that will draw their attention when experiencing sharp increases or declines. Above is an example of a Geographic KPI Dashboard from BatchMaster.

This type of dashboard display is invaluable in an organization that struggles with inventory turn-over, delivery difficulties, production performance and other complex business issues. Because they can draw data from multiple sources with virtually no effort on the part of the management users, they are particularly attractive to stakeholders in an ERP acquisition. By now, most ERP vendors have acquired, partnered with or built a Business Intelligence solution to wrap around their core solution.

Quantifying the savings of Business Intelligence can be a difficult task. Those who have deployed BI and uncovered just one critical flaw in people, products or processes can attest to the return on investment. For your company, you need to look at a few key points:

- Does management need more detail?
- How much time would it take us to gather the reports needed?
- How much do we pay the person who would write that report?
- Would assigning that person to reporting cause other areas to suffer?

Though these are very simple questions, they begin to help the reader form a basis for understanding where their savings will come from. Remember that BI is configured so that day one, the metrics that your managers and executives wish to evaluate will be pre-configured and easily accessible. Your need to run reports and refresh data is removed from the equation.

In qualifying an ERP vendor, the presence of a BI solution is important, if only to have this option for the future. A lack of BI in a vendor's toolbox suggests immaturity or immobility in innovation. Systems with little or no BI experience are likely not moving forward in the industry and you as the end-customer will uncover other hidden feature laggards post-implementation.

## - Teaching executives to use real-time business analytics

Business Analytics capitalize on the notion of Business Intelligence, but apply a level of dynamic reporting that is fairly recent to the industry.

Unlike BI, where dashboards are pre-configured, and with some solutions fixed at the price you pay, Business Analytics takes on a more ad-hoc approach. Some solution vendors will offer a hybrid product that comes with pre-configured dashboards, the ability to query, report and add to a user or profile dashboard. Other system vendors will offer two separate solutions for BI and BA.

In most good Business Analytics solutions, a user can take an “what-if” scenario and see how that plays out through their business and process. BA usually looks and feels just like your BI solution, but will have areas to plug in hypothetical numbers or even drag and drop elements to measure effect.


Let's take an example. Say a BI dashboard has been configured to show a Finance Manager his P & L by location, with detailed information to drill down on that underlying data. Business Analytics would allow the manager to view the data by multiple selection criterion. Our Finance Manager might want to view all items in a product family by Northeast Territory. By selecting the product family, North and then East, the system would automatically render that information into a view, with the ability to save that information. Now, let's say that same finance manager want to see how his P & L would be effected if he lowered the inventory level for the product family or increase the lead time for those items. How would that affect the P & L? Business Analytics is just the solution for these types of questions.

The question for most new customers is “How much will I need and when?” When a hybrid solution is acquired, the cost typically isn't much different than implementing BI now and Business Analytics later. Time spent configuring your system and templates is a foregone calculation. Now, the question becomes “Can I train my executives to use it.”

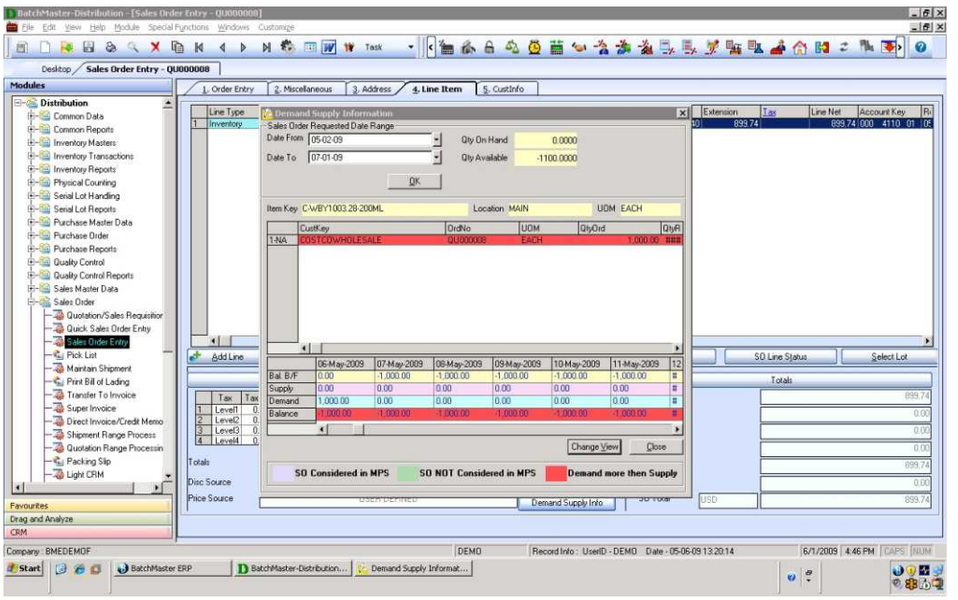
Most executives respond well to the drag-and-relate type functionality that Business Analytics has to offer. While the more tedious data from ERP is masked in the underlying calculations, the display data is relevant, straight-forward and simple to manipulate.

Though the market is riddled with vendors who have acquired BI or BA solutions, it's important to remember that acquiring a system that offers both is usually the cost effective choice. With seat-pricing as a standard, the cost of a BI user as opposed to a BI / BA user is typically insignificant. Powered by QlikView, good systems like BatchMaster offer a single solution for both BI and BA, with implementation and training that scale to your company's budget and schedule. And training for users of QlikView is fast - generally minutes rather than days!

## Surviving the Market: Focus on faster time-to-market, when launching new products

### Improve ATP and CTP

Availability to Promise (ATP) is a business function that provides a response to customer order inquiries, based on resource availability. It generates available quantities of the requested product, and delivery due dates. Therefore, ATP supports order promising and fulfillment, aiming to manage demand and match it to production plans.




ATP is part of many good ERP systems, like BatchMaster. It extends the investigation of normal inventory inquiries to account for lead-times and customer requests dates, in so much as ATP says, will the requested products be available on the day I want them?

Capable to Promise (CTP) extends Available to Promise by taking into account capacity information. Whereas ATP only considers material availability and assumes infinite capacity resources, CTP considers availability of both materials and capacity, giving a more realistic picture of whether demand can be satisfied within a given time fence.

CTP takes the throughput data and in some cases, scheduling information from your ERP master files, runs MRP and MPS like calculations and then provides the sales department and customers with a more precise view of an order's viability. Most ERP systems today are not configured to take advantage of capacity and throughput information at the point of sale. For process manufacturers, capacity is crucial to their ability to promise and deliver. That ability is directly relative to their continuing efforts to sustain and expand their business.

Making sure that the system you acquire has the ability to calculate lead-times, run ATP queries, capture and consider capacity and calculate CTP are crucial for growing process manufacturers. Even though many new ERP customers will not define their capacity initially, or perhaps even use MRP and MPS, they should always be options for future plans.

As the process manufacturing industry grows, the trend towards contract-manufacturing continues to expand. BatchMaster customers from Food, Cosmetics, Nutraceutical,

Pharmaceutical, Paints and Coatings and even Specialty Chemicals continue to see consolidation of companies, outsourcing of work and specialization of manufacturing facilities. All of these factor into the proliferation of contract-manufacturing, which requires ATP and CTP at higher volumes.

*All American Seasonings - Denver, CO is a premier provider of custom and catalog spice blends and flavorings.*

*As a custom spice blender, the company spends much time and effort taking requests from potential customers and turning those into proposed finished goods.Like many contract manufacturers, the sales cycle begins with that customer request, and is soon followed by a product sample. In ERP, industry-specific compatibility for areas such as Sample Management is rare. Few companies provide the level of support for industry verticals as BatchMaster, increasing productivity and reducing manual process.*

*Most ERP vendors do not properly support or understand the iterative process that comes in advance of a contract-manufacturing sale in the food industry. This process requires creating a formulation, packaging samples for internal and external approval, documenting and routing approvals and eventually releasing the finished product and BOM (Bill of Materials) to production. In the past, the time spent sending samples, waiting for approvals and advancing products to production consumed valuable resources at All American.*

*BatchMaster provides not only the formula and sampling modules to support this process, but also a Customer Relationship Management (CRM) component for managing customer interaction.*

*All American Seasonings chose BatchMaster because the system included modules like Sample Management, Kosher Certification and Nutritional Labeling as part of BatchMaster Food ERP. According to Director of Operations, Gene Van Horne, the company chose BatchMaster because, "BatchMaster demonstrated success in the food manufacturing industry."*

## - Leveraging technology to reduce time projects spend "in-basket"

Off-the-shelf finance or discrete manufacturing packages are seldom positioned to gracefully handle project management in the process manufacturing industry. Even those packages who have configurators and / or project management modules don't understand their relationship to a formula / recipe.

Process manufacturers require project management solutions that will take the customer requirements, translate them into a formulation, capture costs of the project, manage documentation and approvals and convert that information into a sellable Bill of Materials.

Typically, the time spent manually working through this process can be called "in-basket." This term refers to the time a project, it's samples and associated compliance documents take to move from its originator, up the chain of approvals, out to the customer, back through reiterations and through to deployment.

When managed, in conjunction with a fully-integrated process manufacturing solution, the time spent in-basket can be greatly reduced. With electronic hand-off between stakeholders, reminders of work-in-process and Customer Relationship Management (CRM) all tied together, approvals and deliveries are significantly minimized.

In evaluating your ERP partner, consider the time your projects spend in-process, as well as the amount of new business potential if a streamlined process were enabled. Also consider the level of accountability for employees and customers when each step, action and response is electronically signed and tracked, limiting finger-pointing.

Finally, consider your industry and its trends. How often are you asked for new formulas, products or samples, only to find that the business has gone elsewhere? What is the value of understanding which customers, products, buyers and even formulators yield the most returns and faster turn-around? How will you re-focus your efforts when you learn who your happiest and most loyal customers are? What is the value of knowing which employees generate quality results the quickest?

## Surviving the Market: Providing individual employees with role-based information that allows them to continuously innovate within their own space

### - Implement department specific dashboards

Operational / Departmental Dashboards are different than the solutions discussed earlier (BI & BA). Departmental Dashboards should be part of any new ERP acquisition.

By capturing the most recent data from the data files that support a department, users can be presented with the information that comprises their daily interaction with your system. Production should be able to see the production schedule for the day, with the status and location of each finished production job, raw material or intermediate. Shipping should be able to see all inbound orders, scheduled to arrive today, as well as all sales orders to pick, stage and ship. Each department should have this type of functionality, available to them when logging in each morning, and have that data updated frequently throughout the day. By monitoring the status of these dashboards, employees are quicker to recognize and respond to calls to action throughout their department.

### - Provide employees the ability to create personal reports to identify inefficiencies

Once the Departmental Dashboards are in place, the ability to reorganize that data should be made quick and easy to department heads and their employees.

Take the example of a Production Dashboard. What is the value to your line leaders to see which of today's orders are still short of raw materials? This allows the employees to re-plan today's work to include some of tomorrow's orders, which are already visible on their dashboard.

Now take a broader approach. What is the value of looking at next week's planned incoming and outgoing shipments? How much time is spent in order to plan the schedule for your dock, or perhaps plan and order temporary labor? Now imagine that process taking less than sixty-seconds.

- **Once these dashboard queries are run, two things should happen:**
- **Users should be able to save that query for re-use**
- **Queries should be exportable to common formats like MS Excel for sharing in planning meetings**

## Surviving the Market: identifying gaps in your product / service offerings that can be filled by acquisitions

### - Forecast by product family to identify fast-growing sectors

Earlier segments of this document discuss Demand Planning (Forecasting) in much detail. In short, Demand Planning offers the ability to look at short-term and long-term forecast models to determine which products or product families are gaining momentum in your sales department.

By accurately forecasting and evaluating at the product family level, determinations can be made at upper-management. Perhaps a product is best manufactured with the equipment and facilities you have today. Maybe acquiring a struggling partner or competitor will fill the gap with low capital investment. Do potential acquisitions match best which growing trends? All of these are questions best answered with the analytics of Demand Planning

### - Measure inefficiencies to determine if others can get the job done for less

Because better ERP systems are capable of measuring costs and loss during the production and packaging processes, then ERP is also best-suited to identify inefficiencies.

Can a potential acquisition more efficiently produce products that you are inefficient with today? Is there a cost-savings associated to pushing expensive manufacturing work to more efficient facilities?

All of these must be considered when considering an acquisition or entertaining a proposal for acquisition. ERP is critical to Sales and Operations Planning, as well as growth propositions.

## Surviving the Market: Develop more efficient processes for integration of systems of acquired companies

### - Identify which candidates utilize systems that will easily integrate your ERP system

So let's assume that you are positioned to acquire a partner or competitor. Having the capital is just the first step. Once you've evaluated the product offerings of both companies, determined what new products will service the market and where they will be manufactured, you've already skipped a step.

In tandem with evaluating procedures and facilities, you must consider what you're getting into technologically. If the company you are acquiring utilizes systems from decades past, the likelihood is that you are in for another entire ERP implementation. Too many times, executives acquire companies assuming that one, large system will meet all the needs of the multiple smaller companies they have acquired. Likewise, smaller ventures often merge without consideration for which company's system will prevail.

Obviously, integrated processes are always the best scenario. However, you must ask yourself, “Is integration practical or even possible?” The first trick is to ask what database each company's operations / finance software operates on. In today's software marketplace, most modern solutions will at least understand Structured Query Language (SQL), which is a type of programming language for many types of databases. If the systems understand this language, you are in a decent position. If not, make sure that older system can at least export their existing records in Comma Separated Value (file) format. This is a common file type, most users would equate with Microsoft Excel.

In all likelihood, acquiring a new process-manufacturing company will require that one company's technology solutions apply to the entire organization. While many of the tools you use can be maintained, integrated and even shared, the “host” system generally must utilize one core technology.

Time spent integrating new companies, training their employees and testing data flow between companies will prove faster and easier with more modern systems, and more complex with older ones as a rule. Always make sure to consider this when evaluating acquisition opportunities.

### - Acquire opportunities where the current system is best-fit for the market goals

A critical mistake made in process manufacturing is trying to remove a process manufacturing system, and replacing it with a larger build-to-order ERP package.

Modern process manufacturing systems usually fall into one of two categories:

- **Systems that integrate with one or more financial packages for market flexibility**
- **Systems that utilize proprietary financials or rare database technology**

If you are evaluating ERP solutions for your process-manufacturing operations today, but believe you could eventually be acquired, then first choice is your only choice.

Unlike the earlier scenario, pointing to a single system for multiple companies, taking on a system like BatchMaster, where the financials are solid, but interchangeable, ensure that you can continue taking advantage of the manufacturing solution. When and if the time comes, that a change needs to be made, rolling up a financial ledger, or swapping out financials represents a marked improvement over starting over from scratch. Both time and money are saved in the process.

## Surviving the Market: Develop more efficient processes for due diligence of systems of proposed acquisitions

### - Evaluate the current technology decision to determine the aptitude of individuals being acquired

Just like your technology decision, your human capital decision must be a factor in new acquisitions. Make sure that the individuals you are acquiring are proficient on their system, that their system translates to use of your system or that they are easily trainable.

Acquiring old technology and the staff entrenched in it can often prove troublesome when trying to move your new improved organization forward. Evaluate the mindset and spirit of the new acquisition as much as you do the technology and talent.

### - Estimate the time for corporate integrations by comparing to historical events

Regardless of the systems you chose or inherit, the likelihood is that someone has traveled down that road before. A good indicator of valuable ERP partners is their ability and willingness to share the contact information of others who've traveled the same road.

Once you've identified your ERP short-list and asked the hard questions, the last one you should ask is “Can I talk to a customer who's been there?” If you are integrating an existing financial package with a new component, make sure to talk to another customer of that vendor who can help you estimate the time and effort of integration. Consultants can provide you with time and materials estimates, but customers can validate their estimations and open your eyes to the pros-and-cons of your potential decisions.

## Surviving the Market: Implementing systems easily adapted to different currencies, regulatory regimes or business models

### - Why should I be concerned with multi-currency?

In today's market, making sure that your system is compliant with unlimited financial currencies is crucial. Not only should you be considering systems that allow you to move to other markets nimbly, but you should also consider your appeal to potential buyers and investors.

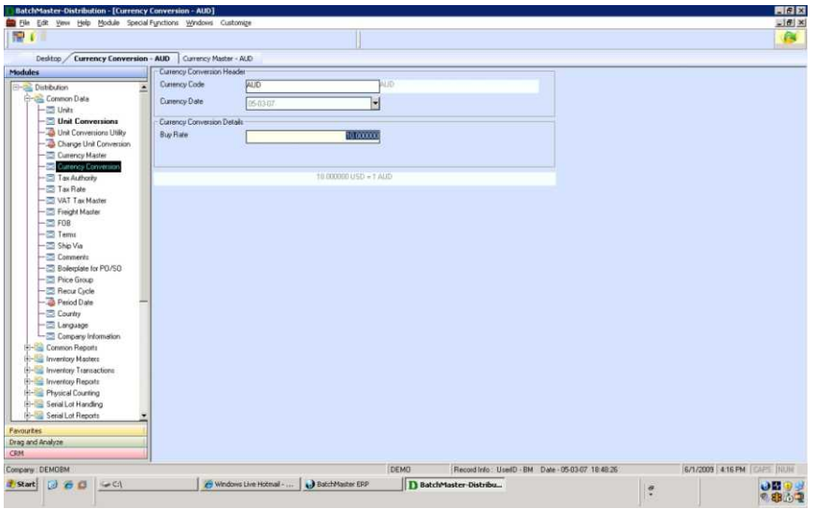
Equally important is the ability to store multi-languages and Vendor and/or Customer descriptions, for printed documents and labeling for different markets, for printing manufacturing instructions in the language of the process worker, and to allow Vendors or customers to receive or place orders using their own descriptions.

*CoValence Laboratories, Inc. - Chandler, AZ is a custom topical application developer and manufacturer, servicing the cosmetics industry.*

*Though CoValence made an early acquisition of financial software to support their business framework, their need to utilize process-manufacturing specific technology became apparent as the organization matured.*

*Because the company is a global supplier of products in their industry, it was important that the system they use for financials and the system they acquired for process-manufacturing were both integrated and international. While their off-the-shelf accounting package allowed them to sell in any currency, CoValence struggled to manually generate much of the documentation that they needed for international regulatory compliance. Much time and expense was exhausted in the manual generation of regulatory documents like INCI and EINICS Listing Reports. VP of Production, Pete Vicek explains, “We needed a system that would automatically generate all the export documents that were necessary to sell to our international customers.”*

*In seeking out BatchMaster, CoValence recognized that BatchMaster understood and supported existing customers in the international cosmetic marketplace. CoValence understood the value of acquiring a manufacturing solution that would tightly integrate with their existing financials. Finance Manager, Julie Dye says, "I was able to leverage my experience with our existing accounting package. I didn't have to learn a whole new program to use our system." Customers like CoValence find this invaluable in the implementation and training involved in new implementations or acquisition of systems.*




Good ERP systems, like BatchMaster ERP, will allow you to easily add new currencies, and many even let you subscribe to regular updates of currency conversion rates to ease the transition to multi-currency.

### - Why should I be concerned with outside regulatory concerns?

More often than not, a company will eventually shift its product offerings to the countries that it services. Even companies looking to expand within the Americas find that transportation, health and toxicity standards vary between the U.S., Canada, Mexico and South America.

Further standards apply in selling / transporting into Europe and beyond. Meanwhile, many countries have combined their regulatory bodies, while maintaining country-specific regulations.

Only software vendors that sell, implement and support world-wide process-manufacturing implementations are positioned to support these new endeavors.

The language, format and content of an export document can change by region, let alone country or continent. Time spent understanding new regulatory requirements and the cost of designing the documents to meet those requirements will generally fall on you the customer, if you have purchased a localized software solution.

### - Our business is simple, we only have one model

Purchasing a solution that is multi-company, multi-currency and international is generally no more or slightly more than purchasing a localized solution.

If a company wishes to acquire, be acquired or even establish more sophisticated partner relationships in the future, the cost to implement those features can be deferred as to such time as they are needed. Core investment in a good ERP system should not vary much between systems. Starting over from scratch buying and implementing a new system, because your system didn't support a critical function, can stall or even halt new business opportunities.

## Dollars and Sense - How will it affect the bottom-line?

### - Typical BatchMaster customers

Consider that today's mid-market process manufacturer can vary significantly, depending upon product lines and complexity. While smaller companies sometimes capture a high-dollar, low over-head product market, others process continually to meet the low-margin demands of large market sectors. Let's look at an average BatchMaster customer


100-205 Employees
$10-$100m Yearly Sales
$1.25m Minimum Standing Inventory

### - Practical Application of the Study

Generally, savings derived from ERP can be measured in two areas; improved productivity and inventory reduction.

You've seen some examples from earlier in this document, discussing how the APICS / Clemson study applies to Inventory Turns (and reduction), now let's take a look at the savings of ERP in the areas of improved productivity.

First, we'll start out using just the numbers from the Clemson survey and the workforce re-engineering estimates, applying those numbers to the example company staff. Using rates supplied by PayScale, Inc. for the top seventy-five percent of the market's pay-rate, you can see drastic examples of how re-allocation of the most important individuals in your organization can benefit you in year one of post-implementation.

| Department | Yearly Salary | Reduction | Savings |
|---|---|---|---|
| Purchasing | $40,000.00 | 1.56(X) | $62,400.00 |
| Planning | $61,000.00 | 1.56(X) | $93,600.00 |
| Warehouse Mgmt. | $36,000.00 | 1.56(X) | $56,160.00 |
| **YEARLY TOTAL** | | | **$212,160.00** |

*Source :APICS Journal (Clemson)*

Remember also the value of reduction in actual Inventory quoted earlier:

| Metric | Pre-ERP | Current | Savings |
|---|---|---|---|
| Inventory Turn-Over | 4.5 | 7.9 | $425,000.00* |

* Based on ten percent improvement on $1.25million Inventory holdings and 3.4(x) reduction of inventory turns.

Looking at the other chart presented earlier:

| Metric | Pre-ERP | Current | Future |
|---|---|---|---|
| Inventory Turn-Over | 4.5 | 7.9 | 11.2 |
| Lead Time (Days) | 55.6 | 41.7 | 31.8 |
| On-time Delivery % | 73.9 | 88.6 | 94.6 |
| Order Splits % | 29 | 13.5 | 21 |
| No. of Expeditors | 10.8 | 5.1 | 2.1 |

Improving Inventory Turn-over and the Lead-time for deliveries contribute to the actual savings gained from Inventory reduction. The benefits to be gained from improving On-time, In-full (OTIF) deliveries are harder to quantify in actual dollar terms, but they can be substantial reduction in freight costs, fewer order cancellations, greater customer-retention, and reduced man-power requirement in the warehousing and shipping areas.

On the Research & Development side, a 'shorter time to market' brings profitable products to revenue contribution sooner, and there are huge productivity gains to made from using a computer-laboratory module to design new products to physical properties, thereby reducing time in the actual laboratory conducting experimental mixes - that still has to be done at some stage, but the process can be sped up considerably.

One area where R&D, Quality Assurance, and Production come together is the innate ability of ERP systems to transfer the intent of R&D to scaled-up production, thereby drastically improving the chance that quality standards will be met. Without integrated data, immediately updated to be current for all departments, this collaboration is impossible.

*Simmering Soups - Somerville, MA produces high-quality soups, salads and entrees within the food industry.*

*Before BatchMaster, the organization relied heavily upon spreadsheets to manage their critical business data. According to Shawn Early (Director of Production), "Sometimes it felt like we were flying blind. We typically were trying to evaluate issues at the end of a month or period, without being able to troubleshoot problems in real-time."*

*Because of short inventory cycles and inventory expirations, Early explains, "Not only were we wasting product, but we didn't understand how much we were wasting or the impact that it had on the cost of finished goods."*

*Before BatchMaster, Simmering Soup could not accurately understand the cost of finished goods. Early comments that, "...our cost of an end-item didn't reflect the fact that ingredients were expiring, and the cost of that waste wasn't reflected in our product costing or the margin of the product we sell.*

*Simmering Soup immediately began seeing return on investment with the use of BatchMaster. Because BatchMaster kept track of exactly what was needed, ordered, received and utilized, inventory record accuracy skyrocketed. Early says, "This is helping us towards our goal of ninety-eight percent inventory accuracy. We're getting there quickly with BatchMaster."*

## Conclusion

### - Is it the right time?

In ERP, timing is everything. In manufacturing, timing is almost always never. Slowing down production is never a good thing. Tying up crucial resources is rarely appreciated.

So when is the right time? It's now. In today's economy, the opportunity to position yourself for sales growth, new opportunity, potential acquisition or even sale is limited only to how flexible and adept you are as an organization.

Implementation of a solid ERP system that understands your industry, scales to your growth and paints your organization is its best light can only usher in new opportunity.

### - What's the right solution for me?

Take away these few questions, as a summary of those proposed earlier in the document.

- **Does the vendor understand my industry?**
- **Is the application scalable to my growth potential?**
- **Can I do business with this vendor 10 years or further into the future?**
- **Is this solution flexible enough to change when the market, our customers, or our situation changes?**

"BatchMaster really forms the foundation on which we can grow our business exponentially, without additional investments in IT infrastructure."
**Richard Northcote Operations Manager, Madison Chemicals**

"Cosmaceutical serves two industries, personal care products and OTC pharmaceutical products. We are an end-to-end contract manufacturer. That means that we go from research and concept development to final packaging. Overall our level of satisfaction with BatchMaster is very high. Without BatchMaster, we just couldn't operate. It's the heart and lungs of our operation."
**Bill Ghuman Controller, Cosmaceutical Research Labs.**

"We can accurately utilize BatchMaster to look one to two months into the future, predict our profitability and adjust our investments and spending. That really makes a difference in today's economy."
**Christian Oertle General Manager, Biozone Laboratories.**

"A growing product catalog provided the company with a number of unique opportunities to expand their business model. We needed a system that would force accuracy and eliminate the opportunity for manual error."
**Bill Pashka - Director of Operations, House-Autry Mills**

**BatchMaster invites you to visit our website, to view and read the many videos and documents available without any requirement to register or tell us who you are - we are confident you will want to talk to us, and welcome your enquiries.**

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