



10 Lessons a Mid-Sized Manufacturer Learned Implementing ERP

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For 7 months, I helped a 35-year old, mid-Michigan capital equipment manufacturer with 45 employees build a new foundation to improve operating efficiency and support future growth. This effort included defining enterprise-wide business processes and integrating these processes with the Enterprise Resource Planning (ERP) system that the company had purchased 2 years earlier. It is worth sharing some “lessons learned.”

This project started because of the following problems identified by senior management:

- unreliable inventory accuracy,
- problems meeting customer delivery commitments,
- people dependencies through-out the company,
- declining operating margins, and,
- a chaotic work environment.

Let’s take a look at ten lessons learned during the course of this project.

1. ERP must be integrated with company business processes.

Other than Order Administration and Purchasing, only one person in the company used the ERP system on a “after-the-fact” basis to record business transactions. Transactions were not performed “real-time,” but were batch processed when this individual had time. [To understand the implications, imagine your bank processing deposits once a week or once a month.]

For example, it wasn’t possible to look up “how many parts were on hand” as it was necessary to physically find the parts to make such a determination. No one looked up what parts or products needed to be shipped or what jobs needed to be opened to satisfy order demand. The “system” was driven entirely by people and paper, not technology.

While some people may believe that the software inherently provides the business processes, this is an invalid assumption. The software is a tool that must be driven by the client. There are different ways of driving a tool to accomplish a business result.

My client struggled for a couple of years before making a serious commitment to making the software an integral part of its business.

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2. The value-added software reseller (VAR) did little to help the client benefit from their ERP investment.

I wonder whether some VARs see themselves simply as resellers of software or as a partner in their clients' success. In this instance, the VAR seem to have adopted the former strategy rather than the latter.

Be sure to ask questions of references that go beyond the technology issues. Look for a VAR who has made their clients more successful with the technology than they would have been without them. If you don't have proper support, this will negatively affect your project implementation.

3. Create process dependencies; eliminate people dependencies.

Your company needs to end up with a team of people who will be responsible for implementing the technology and developing the reusable business processes that are integrated with the technology.

A small company's system administrator is not the person who can adapt the technology to the business—they don't have the breadth of business experience to understand the challenges that lie ahead. Similarly, whoever takes on this role must make sure the company is ultimately not dependent on them or on any single employee.

Start thinking about the composition of that team from day one. And, make sure the goal is to make each person and department self-sufficient.

4. “Blended jobs” promote confusion implementing ERP.

When one person or a group of people support multiple functions (e.g., Shipping, Receiving, Inventory Control), it is a challenge to get them to think in terms of a specific role that might be playing at a moment in time with respect to making transactions in the ERP system. For example, the step of receiving parts into inventory could be compromised by simply giving parts to someone in production without first transacting the receipt.

Each person involved in generating transactions must understand their specific role at a specific point in time. We faced a significant challenge getting people to focus on playing one role at time rather than skipping steps. We had to get them to do one thing at a time rather than thinking ahead. A transaction-driven system requires that the steps be performed in the proper sequence. Skipping steps or not doing them in a timely manner later provides incorrect answers about the current state of the business.

5. Transaction-driven systems aren't intuitive for users.

It has been a struggle to get people to use the system to transact inventory movements. For many, many years, inventory transactions were seen as a “front office” task performed after the fact.

To communicate the importance, we used metaphors such as “making bank deposits” to communicate receipts and we noted that no one would find it acceptable to wait days or weeks before the money was available in an account. We used the expression “shoplifting” to denote bypassing the checkout stand—taking parts without transacting them. No one wants to be accused of shoplifting!

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Use real-life examples that people can relate to rather than “techno-babble.”

6. ERP requires that a company’s core activities are date-driven.

It’s difficult to meet a date that is defined as “whenever.” In this particular firm, there was too much parallelism in all activities. The highly engineered products were still being designed as procurement activities and manufacturing activities occurred. You can imagine the internal frustrations as everyone attempted to hit a moving target. Engineering never had a date to finish a design just a manufacturing never really had a date to start and complete a product.

Another problem of not being date-driven is bringing in and paying for inventory long before it’s needed. Engineering would tell Purchasing what to buy to “get it in-house” so they wouldn’t have to worry about it. Of course, the company would have to pay for the inventory long before they could convert the inventory to cash through product sales. What was this “peace of mind” costing them? A lot. While this practice was tolerable when the company was “cash rich,” it has negative consequences when the company became “cash strapped.”

The company is now date-driven in all activities.

7. When you don’t have planning systems, you keep a lot of parts on-hand “just-in-case.”

Many of you are familiar with “just-in-time” inventory systems. This company has what I refer to as “just-in-case” inventory—nearly \$600,000 worth of parts on-hand for which there is no order-related demand. For a company this size, that figure is staggering.

Senior management has now implemented (at my behest) an approval process to authorize the purchase of any items for which there is no sales order or product demand. [Note: This program is not terribly popular with people who’ve had free reign to buy whatever they wanted when they wanted.]

There is also a program underway to propose a safety stock program so management can authorize the investment in parts prior to purchase orders being placed

8. Money has become transparent in business.

People have lost sight of the notion of “cash” in business. We pay by credit card, we pay by check—money has become an intangible. We spend money in one department and pay in another.

I constantly remind people to think not of buying inventory, but instead think of stacking thousand dollar bills on a shelf. It’s not just inventory—it’s money.

What does it cost to tie up capital? Studies suggest the cost of keeping inventory on hand is up to 30% annually. For this client, that would be about \$180,000 annually. What could you do with \$180,000? For that matter, what if the company had not spent the \$600,000?

9. When you raise the bar in business, not everyone can or will reach for it.

As much as you might hope, not everyone is willing or able to adapt to implementing information technology in business. It’s important to recognize where your people vulnerabilities exist in the organization and make decisive corrective action.

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It's not okay to continually work around a problem supervisor or a key employee. The world of business cannot stay the same. People need to grow as the business need grows. You need to be prepared for people reaching a level of incompetence.

10. Invest in a quality projection system for training purposes.

For several months, we borrowed a projection system for company-wide training sessions. But, when the time came to show people how to use portions of the ERP system, we would often have 3-8 people huddled around a monitor as small as 13"

You can't train people properly in such a constrained environment. People don't engage, they don't learn.

Get the proper equipment, make the training more interactive, encourage people to ask questions. Don't skimp on something this important.

Conclusion:

What was involved in helping this company make this transformation? The outcomes of this project have been:

- Implementation of a new part numbering system and converting some 4,000 parts to the new system
- Complete physical inventory to establish an inventory baseline; also converted inventory to new part numbering system
- Company-wide training and orientation of new processes and procedures
- A product release and change control process plus implementation of new on-line tools
- An end-to-end business process for the company's highly-engineered products
- Definition and integration of business processes with ERP
- Implementation of material requirements planning (MRP) to better manage cash flow and time inventory receipts to coincide with actual need.

This was a sizeable but significant effort for a company this size. The company cultural issues were significant—the folks in mid-Michigan are hesitant to embrace information technology. They also do not have the same sense of urgency that you see in a venture capital-funded organization.

The project is well underway from an implementation standpoint. We long ago reached a point of no return—the project can only continue to gain momentum.

When the going gets tough, some employees will try to romance the past--“the good old days”—forgetting that the past wasn't nearly as glamorous as they remember.

Management must remind them that the past does not look like the future. And, without the new processes, the company will likely stagnate and die as it runs out of cash.