

Lean Manufacturing

## Maintenance to ERP or Not to ERP

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Maintenance-specific modules from suppliers of enterprise resource planning systems have traditionally involved costly implementation and learning curves and thus less-than-desirable ROI. Manufacturers can consider going the route of partner solutions, usually software-as-a-service (SaaS), to achieve maintenance operations savings.

Enterprise resource planning systems can be large and complex and a pain to get up and running, but once implemented, they deliver. Deploying ERP systems into a manufacturing process generally promotes a smooth and efficient flow of material to the production line, with minimal wasted time and money. The benefits are tangible, with improved production scheduling, effective inventory control, improved quality, and lower overall costs.

The large gains for manufacturing generally offset the implementation costs and inevitable learning curves associated with ERP systems. But what about some of the less shiny parts of the overall production process, such as the management of maintenance, repair and operations (MRO) parts inventory and critical spares? Maintenance and MRO parts are required to keep production machines in tip-top shape, and most ERP systems provide modules capable of MRO management, but are companies finding it makes sense to leverage those modules? Do the potential benefits outweigh the cost of implementation of the specific ERP modules?

Generally, the answer is no. Yes, the machine needs to keep running, but implementation costs associated with deploying the necessary ERP maintenance modules are often not offset by the savings. There are significant savings to be had, however, if the implementation costs and learning curves can be brought inline. So what's a company to do?

### What Makes Sense?

Deploying any new capabilities needs to make sense financially and is driven by the possible savings. In a typical maintenance scenario, you have a team of 20 folks tasked with keeping your plant machinery up and running, at a shop rate of \$40 per hour per employee. Let's say that as part of their maintenance routine, each team member makes two trips to the supply room per day, looking for required parts and materials.

The team member doesn't know if the parts and materials are actually in the supply room, so the trip may or may not bear fruit. Regardless, let's assume that the maintenance person spends five minutes in the supply room, either hunting for stuff or waiting on whoever is doing the hunting. Then add another five minutes getting to and from the supply room. That equals 10 minutes per team member, twice a day, per single shift.

As shown in the table below, the numbers begin to add up, with this scenario generating real costs of over \$5,000 per month, just on supply room excursions. ERP systems offer some swell modules aimed at reducing costs like these, but we're back at the central problem: The potential cost savings do not likely offset the licensing costs, implementation effort and learning curves associated with deploying ERP modules. But there's an alternative.

Number of Employees	Cost Per Hour	Trips Per Day	Minutes Per Trip	Days Per Month	Total Minutes	Total Cost
20	\$40	2	10	20	8,000	\$5,333

This table shows how a real-life scenario can generate costs of over \$5,000 per month, just on supply room excursions.

### Consider a Partner

Rather than looking to their ERP systems, many companies are looking to partner solutions that can provide the functionality they require to capture maintenance savings. To make sense financially, these ancillary systems need to be easy to deploy and cost effective and have a shallow learning curve. In addition, easy integration with the mothership (the ERP system) is crucial – data often needs to flow to and from the partner solution and the company's existing business systems.

Users must determine the functionality required to start bringing that monthly \$5,000 supply room cost in line. Second, cost, implementation, and integration targets need to be met to make this a worthwhile exercise.

Information is king, and there is a lot of it in a typical manufacturing facility. But that does not mean it's available. Would maintenance team members make treks to the supply room if they knew the items they wanted were nowhere to be found? That is 10 minutes saved per person; it does not sound like much, but it adds up. Partner solutions available today provide the ability to easily view real-time inventory levels on tablets and other mobile devices or local workstations. By simply entering the desired part number or approximate description, the employee knows whether or not the item is in inventory, and even which inventory location or supply room has the item.

Now that maintenance personnel know their MRO items are available, rather than head off on a journey to the supply room, they can leverage the requisitioning capabilities available in some partner solutions, directly from their tablets, mobile devices, or local workstations. Point-of-use requisitions allow requisitioning the material from the work site, cutting out the wait time at the supply room. And if it's not an item normally stocked in inventory, maintenance team members have direct access to supplier catalogs and OEM parts databases.

What if the supply room has not filled a requisition, or it has to order the parts? Many modern partner solutions provide built-in notifications, so team members on the floor can be notified by the supply room when their materials are ready to be picked up. Again, notifications go directly to their tablets, mobile devices, or local workstations.

Technology eliminates supply-room wait time, but what about the journey itself? While not a direct feature of the partner solution per se, with the supply room receiving and filling requisitions in real time, companies now have an opportunity to employ less expensive staff to run the materials out to the work site, eliminating the need for higher-priced team members to make trips to the supply room, further lowering the \$5,000 monthly cost.

If the supply room does not have the desired item in inventory, or if the part is not something that is stocked, with the requisition already created directly at the work site, there should be capability for the purchasing team to easily convert the requisition to an order, without the need to re-enter any data. Some partner solutions provide this capability, with something as simple as a single click to create a purchase order directly from the unfilled requisition.

While those are a few maintenance scenarios, a more complete listing of desired partner-solution capabilities is as follows:

- Point-of-use maintenance management features
- Inventory visibility
- Easy search
- Access to supplier databases, with punch-out capabilities
- Access to OEM part databases
- Point-of-use requisitions
- Order creation from requisitions
- Notifications
- Purchase order confirmation from vendors

### **Business Impacts**

Unlike most ERP systems, some partner solutions can provide comprehensive inventory, procurement, and maintenance management capabilities as subscription offerings. Often called software-as-a-service (SaaS) offerings, these systems provide companies access to a full suite of modules based on a single monthly subscription fee. Typically, these fees are in the range of \$1,000 or less per month and can include unlimited user seats. Not all solutions support unlimited users, so it pays to look around. At \$1,000 per month or less, assuming all the features needed are included, we just saved \$4,000 per month.

Implementation can be the challenge, often requiring a lot of back and forth with the IT department, security folks, management, and others. Installing an outside application into a company's critical network environment can be a daunting task. Look for those partner solutions that are web-based, providing their capabilities completely within an internet browser. SaaS means no software gets installed into your company's local environment, which means no hassles with the IT department, no equipment to purchase, and no locally installed software to maintain and upgrade.

Implementation often requires provisioning solely within the partner provider's secure server environment and nothing on the user's end.

Partner solutions are still separate systems, which is why integration capabilities are important. ERP systems generate a lot of data, and the partner solution needs to talk to it or to other systems within your environment. So, playing well with others is a key consideration when considering a partner solution. Importing and exporting data, either manually or as part of an automated mechanism, are key considerations when evaluating solutions to use alongside your existing systems.

The learning curve with using a maintenance module is one of the reasons to consider a partner solution. And it makes sense – many ERP solutions have a long history, which generally means a lot of baggage associated with how things are accomplished within the application that might not be the most intuitive. In contrast, partner solutions are often purpose-built, using newer design patterns and technologies, with an emphasis on usability. Gone are the days of the long training seminars. Applications should be intuitive and easy to use, and partner solutions often offer that.

### **Going Forward**

ERP systems deliver, but they can be a bit of a hammer when not everything's a nail. Finding a partner-solution maintenance module that will fit nicely alongside your existing systems may allow you to chase those slightly smaller cost-savings wins. By ensuring the solution provides a cost-effective licensing model, easy implementation, comprehensive integration capabilities, and the features you need, you will be able to support the business goals and objectives of the enterprise.

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