6 STEPS TO CHOOSING THE RIGHT ERP AND MES SYSTEMS

INTRODUCTION

Buying an ERP or MES system for you can be a long, involved process. You hope to settle on the right solution so that you won't have to repeat the process in a year or two.

It's a big decision, but it's one that thousands of manufacturers have navigated successfully. And choosing the right ERP or MES can dramatically improve virtually every aspect of your business.

This guide outlines six best practices you should follow to find exactly the right ERP system for your manufacturing business, including, setting goals and desired outcomes, developing a business case, determining who is involved, evaluating options, understanding the vendor landscape, and validating your choice. This guide outlines six best practices you should follow to find exactly the right ERP system to take control of your business, that align with your goals and desired business outcome. setting goals and desired outcomes.

1. Set Goals and Desired Outcomes

As with any large project, it makes sense to begin by determining exactly what you're trying to accomplish. Your organization probably has many short-term goals to achieve but you can't forget that your decision means you will have this system for 10 years or more. Spend some time thinking about the long-term company goals that your system needs to support. support.

As you set your goals, follow these steps:

Define your organizational goals and outcomes.

A) Consolidation of systems or processes. If you've never had a true ERP or MES system, your data most likely lives in different databases, forcing your employees to log into multiple systems.

B) Business expansion. Centralizing your business processes on one platform, can help everyone work together towards profitable growth.

C) Realigning headcount. A consolidated ERP or MES system can decrease the amount of employees that are entering data, reduce the paper trail and manual processes.

D) Doing more with less. A new system can help you cut the waste from current business processes so that you can grow without increasing budgets or adding headcount.

E) Automating business processes. A central system automates and digitizes manual processes to save time, reduce errors, and provide a single source of truth.

F) Cleaning up data and becoming more data-centric. If your data lives in siloes, then it probably contains redundancies and inaccuracies. Fragmented data makes it nearly impossible for your decision-makers to maintain a clear view of your business performance. One data source that is always current and available to everything eliminates these problems.

List the pain points with your current system. There must be a reason you're looking for a new system. More than likely, frustrations have built up to the point that someone finally said, "We can't put it off any longer

Ask yourself:

A) What are the gaps with our current system?

B) What are the biggest or newest challenges that our system is not helping us meet?

C) How is our current system keeping us from executing on our strategy?

D) How is our current system hindering us from responding to changes in the market?

E) What's the impact of these pains in terms of wasted time, rising costs, and missed revenue opportunities?

Putting these pain points down on paper is more than just an opportunity to vent frustrations. It's also an important exercise to help you focus on the requirements for a new system.

Create a wish list from departments. When your various department heads hear that your company is considering implementing a new system, they'll begin to chime in with their own must-have features and characteristics for that system.

Here are some of the specific requests you may hear from different departments:

A) Manufacturing Operations: Simplified processes, greater ability to connect people and departments better visibility to production operations, and a comprehensive quality management system.

B) Business Management: True automation and innovation of cross-departmental processes, tools that increase supply chain collaboration, greater visibility and transparency, and real-time production data.

C) IT: Fewer systems and integrations and a cloud platform that connects to multiple devices.

D) Create a list of key technology trends and rate their importance. Research the latest technology trends and the impact on the manufacturing industry. Then rank these trends based on your business needs and desired outcomes.

E) Align everyone on goals and desired outcomes Now that you've done this detailed research, crystallize your goals and outcomes in a concise list. Share the list with all your stakeholders so that you can make sure everyone is on the same page before you move forward.

2. Develop a Business Case

Before your selection process can go any further, you'll need to secure executive sponsorship. You'll want their support not only for the expense of buying a new system, but also for the research and evaluation your team will have to invest in finding your new solution.

Here are the steps to follow:

A) Determine your budget. Your executives likely have a hard limit—or at least a well-defined range—for the amount they are willing to spend on your solution. Find out what that is. You'll need to know not only so that you can limit your options, but also to give your vendors a better idea of what they can provide for you. At the same time,

keep an open mind. You don't want to miss an opportunity to better your business because of slight budget overruns.

Consider also which additional modules you may need to purchase later as your business grows. With a cloud solution, you may be able to simply increase your subscription fee based on usage, whereas an on-premises solution will likely require you to buy licenses for each new module.

3. Determine Who, What, Where, When

Once you've gotten the official green light from your executive team, it's time to launch your actual selection process. Here's what has worked for many manufacturers:

A) Assemble an evaluation team. As these solutions impact many people in the business, you will want to assemble an evaluation team composed of stakeholders from all departments. This group should include power users as well as those who will use the system mainly for reporting. The right ERP and MES system may be used by more people than you might think, so consider the benefits and cost of broader usage.

But don't overlook the importance of defining roles and processes within this group. Who is responsible for researching potential vendors and compiling a short list of solutions to evaluate? Who should make contact with these vendors? What does it take for a

Top 8 Signs It's Time to Update Your Systems

1. Frequent overstocks and stockouts
2. Late or short shipments
3. Poor performance on overall equipment effectiveness (OEE)
4. Missing production goals
5. Disconnected quality processes during production
6. Out-of-date or unavailable data
7. Too much time spent on repetitive tasks such as data entry
8. Slow retrieval of documentation for audits

solution to advance to the "next round"—or to be eliminated from consideration?

How will you make your final decision? Will you require sign-off from each stakeholder on the evaluation team? From every department head in your organization? Is there a Board of Directors that has to sign off? Or will there be one decision-maker? These are questions that only you can answer for your organization.

B) Develop your timeframe for purchase and go-live. ERP and MES evaluations could theoretically go on for years—but they shouldn't. Although you want to be sure you get it right, you may also have major events coming up in the life of your company. Perhaps you want to make sure a your new platform is in place

before a merger or acquisition is complete. Or maybe you want to close your books at the end of your current fiscal year on your new platform.

In any case, set your target go-live date and then back out from that to allow for your projected implementation time. Depending on the size of your organization and whether you're implementing an on-premises or a modern cloud solution, your implementation may last anywhere from a few months to two years.

C) Prepare for change management. Ever noticed how much people resist change? No matter what new functionality your new platform delivers and how intuitive its interface is, a certain percentage of your employees will be reluctant to adopt it, preferring to stick with outdated systems and processes.

Set realistic deadlines for user adoption of your new system, with the goal of gradually reaching 100 percent. Put a communication plan in place that prepares employees for the launch of the new system, drives them to log on as soon as it goes live, and provides them with an outlet for submitting feedback and asking questions. And don't forget to provide adequate end-user training on the new system.

D) Determine how you'll measure success. After all your careful evaluation and planning, your ERP project is sure to

Choose an ERP or MES In-House or Hire Consultants?

You don't have to go it alone as you choose a ERP or MES platform. Many companies turn to various third-party consultants to help them navigate the crowded field of solutions. If you want to be sure you're not missing anything in your search, consider getting help from one of the following types of partners:

- Technology advisors can help you navigate the complex process of determining requirements and become your "negotiator for hire." Technology advisors live on the forefront of the latest trends in technology with a strong understanding of what works and what doesn't.

- Systems integrators know the ins and outs of different technologies and have experience pulling them together to address manufacturers' unique business and technology needs. Though they are specialists in leading technologies, they generally have broad market coverage and employ subject matter experts in many different disciplines.

- Industry analysts stay on top of, and in many cases, drive technology trends across multiple industries. This makes them true subject matter experts. Representatives from Gartner, Forrester, IDC, LNS Research, and others were practitioners in their fields before becoming an analyst.

have a positive impact on your company. How will you measure this success and communicate it to your executives? Decide how to tell your story in terms of user adoption, daily logins, reduced licensing fees, reduced maintenance fees, smaller IT footprint, etc.

E) Scope the project. In step 2, you estimated an implementation timeline. Now, you'll create a milestone plan for the project. Be sure to set target go-live dates for individual modules. And don't forget

to celebrate each of these milestones when you achieve them.

F) Decide whether to have a formal RFP process. Traditionally, companies looking for an ERP or MES system would send requests for proposal (RFPs) to the vendors on their shortlist. The RFP process is theoretically a good way to get comprehensive information about exactly what each vendor can provide for you, but it's not always the right answer.

RFPs can help you weed out vendors that aren't serious about working with you—but that's a double-edged sword. Because proposals take so long to assemble, some vendors simply refuse to participate. By requiring formal proposals from each vendor, then, you may be unnecessarily excluding some very good vendors from participating.

G) Prepare for internal pushback. Just about every ERP or MES selection process requires considerable diplomacy from the evaluation team. Chances are, you'll make what you think is an airtight case for your solution of choice—and then get blindsided by criticism from an executive or department head who has a different agenda.

Don't give up. Be prepared to keep making your case using the facts you've assembled. And remember: if you've made a compelling argument based on ROI versus TCO, no reasonable person can claim that your new will be a bad thing for your company.

4. Evaluate Options

Now that you have a clear understanding of your options, you can begin evaluating what various ERP and MES systems have to offer. Be careful not to focus only on features and functions—consider how the

overall solution will enable a more connected enterprise.

Here are some points to consider:

A) Should you choose a cloud solution? Many companies are moving their businesses to the cloud for a variety of reasons— including cost savings, reduced IT burden, seamless upgrades (or elimination of upgrades altogether), enhanced security, and automatic data backups. Before you consider making a similar move, determine whether your business requires you to manage your own system. If not, it may make sense for you to let a vendor handle your system so that you can focus on running your business.

B) What are the impacts of a highly customized solution? If you want to be able to scale your system freely and adapt it to your changing business processes, you'll need to be strategic about the customizations you make. Every customization makes it more difficult to upgrade your system and connect it to your other applications. If you're committed to minimal customizations and want the most seamless upgrade process possible, you should strongly consider implementing a versionless, software-as-a-service (SaaS) ERP system.

C) How flexible is each potential solution? Again, it's best not to customize your new ERP and MES too heavily. But the flip side is that no platform should force you into following its business processes. Implementing a new ERP or MES is a great opportunity to embrace best practices—but your new platform should allow you to tweak the specifics of those best practices to reflect the unique realities of your business environment.

D) Which cost model suits you best? We discussed TCO earlier. By now, you should have a strong opinion on whether a perpetual license, a renewable subscription, or an unlimited/enterprise-wide licensing model is the best fit for your company's financial situation.

E) How will your users respond to any proposed solution? The age of simply implementing the best functionality and then investing solely in end-user training is over. Your employees crave a work experience that's similar to their online shopping experiences. It's critical to ensure that any user can access the system from anywhere—and that users have confidence that the system is a single source of truth.

Remember, it's good to include users early in the evaluation both to evaluate ease of use and to serve as internal evangelists to other users.

F) How will you go live? Depending on the size and skill set of your IT team, you may be able to implement your ERP solution in-house. More than likely, though, you'll need to engage some level of assistance from your vendor or third-party consultants. Consider the time and budget demands each choice of platform will make on your IT organization.

By the end of this stage of the process, you should emerge with a shortlist of possible ERP solutions. These are the platforms that "check all the boxes" for where your company is at today and where you expect it to go in the next five to 10 years. From here, you can start drilling down into the details about what each vendor has to offer.

5. Understand who the vendors are

Now that you've carefully researched ERP and MES vendors and have a shortlist of possible solutions, it's time to begin engaging the vendors directly and letting them demonstrate how well they can meet your specific needs. Here are the steps to follow:

ERP and MES

Manufacturing Operations	Business Management	IT
• Shop floor control	• Visibility	• Security
• Production KPIs	• Financials	• Data access
• Error-proofing	• Compliance	• System consolidation
• Quality	• Global needs	• Integration
• Planning	• Expansion plans	• Process management
• Maintenance		• Mobile access

A) Plan discovery sessions with vendors. Contact each of the vendors on your shortlist and arrange for them to visit you in person to discuss your business needs. This step is not to be confused with a demo session—it's a meeting in which your vendor should be very much on "listening mode." After all, if they can't understand your business, they won't be able to help you enhance it.

B) Arrange for live demos. Once your potential vendors have taken the time to understand your unique business challenges, they'll be able to present product demos that are tailored towards meeting those challenges. Insist on having each vendor use your sample data in the demo. And don't accept a generic, canned demo as "proof" that a vendor can meet your needs. You or your consulting partner should let each vendor know that unless they can offer you a tailored demo using your data, they will be eliminated from consideration.

C) Check customer references. Most vendors love to provide customer references. Take them up on their offer to not only send you customer case studies and videos, but also speak directly with their customers and ask them the tough questions about day-

to-day life on their platform. And demand to speak to those references without the vendor present to ensure you get an unbiased opinion.

D) Attend user conferences. If you have the time and budget, attend user conferences for at least a couple of your top vendors. These conferences are a hotbed of honest communication about the platform. By attending training sessions, for example, you'll hear the unvarnished truth about what the top technical and functional challenges are on each platform and what it takes to overcome them.

E) Check on your vendor's overall health. You'll want to research their:

- Financial viability. Look for a vendor that's growing and thriving—not one that's losing market share.

- Leadership. Is there constant turnover among your potential vendor's executive team, or have they formed a stable group with a sense of shared purpose?

- Support offerings. Verify that it will be easy to get technical assistance when you need it, through multiple convenient channels.

- Training offerings. Ensure that your potential vendor offers comprehensive training courses

in your choice of online or in-person format.

- Upgrade track. Can your potential vendor commit to a regular schedule of upgrades? Will these upgrades be made automatically, or will you have to commit IT resources to them? And can you choose which enhancements to adopt and which to skip?

- Tech stack. To put it bluntly, if your vendor built their solution on outdated client/server technology and then stuck a web interface on it, this approach is going to catch up with them. Consider solutions that are built natively on modern web technology, because that's where the future of business software lies.

- Customer Community: Verify that there is an active, engaged customer community. Do customers share best practices? Are they all running the same software version? Your peers can be critical to your success; make sure you have a group you can leverage.

Once you've put your shortlist of vendors through this scrutiny and eliminated the vendors that couldn't meet your standards, you should come away with three to five strong contenders for final consideration. Now you're ready to assess how well each of your remaining candidates fits your business.
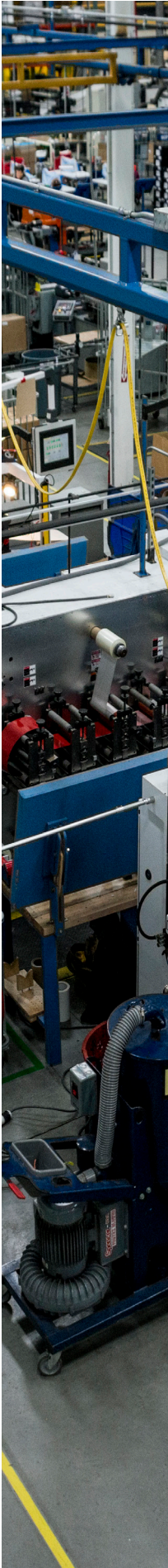
6. Validate the Business Fit

As you get closer to finalizing your decision, pay close attention to risk assessment. If you've followed a disciplined process and identified the risk threshold for your company, your focus should be on mitigating risks and delivering value to your business. Now is the time to validate the solution you've chosen to ensure that it will deliver the value you expect.

Here are some key points to validate:

- If you've chosen a cloud solution, can you configure and test it without interrupting your business processes? Are updates forced automatically or can you choose or opt-in to features as you are ready for them?

- Is IT ready to connect, collect, and share data from the shop floor to your ERP or MES solution? To enable connected manufacturing, you must have visibility to your data from your shop floor.

- Can each functional group in your organization justify their decision to your board?

- Does your projected schedule for implementation, training, and go-live align with your business priorities and calendar?

- Does your chosen vendor's pricing structure give you the option of paying by site license versus seat? Do you even want to deal with counting or managing licenses?

Conclusion

Buying an ERP or MES system can be a long and complex process. There's a lot to think about and plan for. But if you make the right decision, your business will be well positioned to grow and thrive in the next five to 10 years.

Just remember: ERP or MES system isn't a burden or a mere business expense, but rather, an enabler. Your system should help you take control of your business more effectively. If you follow the steps in this guide and focus on how your new system can enable your people and enhance your processes, you'll end up far ahead of where you are today.

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