ERP PLAYBOOK

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IMPLEMENTING ERP: A Systematic Approach for Your Business

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GUIDE TO ERP: A Systematic Approach for Your Business

ERP PLAYBOOK

Highlights

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Introduction

Companies of all sizes are likely struggling with increasingly complex business environments, the need to streamline critical processes, and ever-escalating customer demands and expectations. For midsized businesses that still rely on manual processes and legacy IT solutions, the ability to keep pace with modern business needs is even more daunting.

The lightbulb moment for many business owners is when they decide to replace outdated or inefficient accounting and planning tools with enterprise resource planning (ERP) solutions. Multifunction ERP suites can provide tightly integrated applications ranging from financial operations to inventory management, all sharing a common database and user interface.

The decision to migrate to a new ERP platform is just the start of what can be a long and complex journey, as management teams navigate through the evaluation, selection, and deployment process. Fortunately, today's ERP systems are often easier to deploy, learn, and use than their predecessors. Some solutions are also tailored specifically to the needs and budgets of midsized companies, as well as to the requirements of specific industry sectors.

On the flip side, companies must wade through many more ERP offerings and options than in the past—everything from core feature sets to industry-specific capabilities to cloud vs. on-premise deployment considerations.

Adding pressure to this process is the central role an ERP solution plays in a company's operations and, ultimately, its success.

"An ERP deployment is like doing heart surgery on the business," says Russ Graf, Vice President of North American Sales at NETSTOCK, which sells inventory management and analytics software.

Daunting as that prospect may seem, a modern ERP solution can mean the difference between success and failure for many midsized companies. Fortunately, you don't have to make the ERP journey on your own.

Evaluating business pain points, opportunities, and objectives

The starting point on the road to ERP is not with a software spec sheet, but within the business itself. For many midsized companies, scrutinizing their own operations can be the most challenging step of an ERP deployment. Busy executives and managers have little time to conduct deep-dive analyses of their businesses. Often, these decision-makers must also deal with their own and their employees' comfort with existing technologies and processes, and their resistance to change.

"Urgent demands tend to drive day-to-day activity," notes Graf. "It can be tough to step away from the business and think about it."

That said, even the most harried of executives usually have a good grasp of their main pain points and overarching business objectives. Is the company failing to meet customer expectations, over- or under-stocking its inventory, missing new sales opportunities, or losing market share?

Often, the root cause of these and many other issues can be traced to technology limitations, inefficient processes, or a combination of the two. Legacy IT solutions may have worked fine when the company was smaller, or when competitors and customers moved at a more leisurely pace. But those solutions can start to crack and fail as companies grow, supply chains become more complex and global, and the digitization trend puts a premium on near-instant operational visibility and response.

For example, "Without integrated costing, it might be a month before you know if what you're making is profitable," notes Joe Jenders, Founder and President of Vrakas/Blum Computer Consulting, a Sage 100 business partner specializing in the manufacturing sector. "That can make it hard to react to changing conditions such as the cost of materials or other market changes."

The internal operations assessment stage is also the point at which all department heads and other key employees must become involved in the ERP migration process. Because ERP is a pervasive, cross-company solution, making the right choices requires top-to-bottom involvement.

Most critical, of course, is buy-in and support from the CEO and other C-suite executives. But it will often be operations executives and managers who take the lead to identify specific technology and process shortcomings and needs.

Equally important are front-line employees, who are sometimes excluded from the initial stages of ERP strategy and planning sessions. This is a big mistake—failing to involve accountants, warehouse workers, or shop floor employees from the start can cause long-term problems.

"It's sad how often ERP initiatives don't bring in people on the front lines early in the planning process," says Laurie McCabe, Cofounder and Partner at SMB Group, a market research and analyst firm focused on technology adoption by small and midsized companies. "If those people don't like the solution once it's deployed or if it doesn't address their main needs, the disconnect can cause projects to ultimately fail."

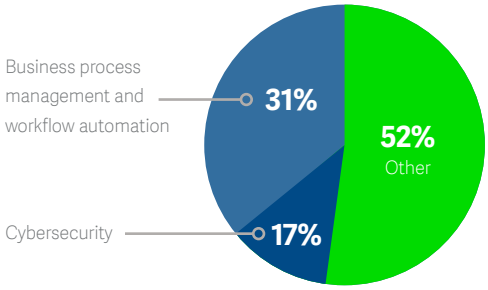
"Without integrated costing, it might be a month before you know if what you're making is profitable. That can make it hard to react to changing conditions."

Joe Jenders
Vrakas/Blum Computer Consulting

An important part of the self-assessment phase is determining the baseline metrics—or key performance indicators (KPIs)—of the company's core business processes. KPIs can range from the time required to close the financial books at month's end to the frequency of inventory stockouts, and it can be a challenge for midsized companies to get their arms around these metrics. Still, only by knowing their current process baselines can companies determine whether and how much those operations will improve with an ERP deployment.

The importance of making such improvements was made clear by CIO's Tech Priorities 2019 survey of 200 IT leaders. When asked what the single most important technology project they were working on was, 31% said business process management and workflow automation. That objective led all others and was nearly double the 17% who identified cybersecurity as their top technology project. (Respondents from small/medium-sized businesses were even more focused on process and workflow automation, with 37% identifying this as their highest technology priority.)

Top technology projects



SOURCE: CIO 2019 Tech Priorities

ERP migration at-a-glance

PREPARATION

- **Scrutinize your own operations**
- **Get buy-in and support from the CEO and other C-suite executives**; front-line employees–shop floor, procurement, and core functions like HR and accounting–are equally important
- **Determine the baseline metrics—key performance indicators (KPIs)—for core business processes**
- **Inventory and map current systems, workloads, and workflows**, as well as the data the systems process, store, and transmit
- **Answer questions such as:**
  - Are systems and data siloed or well-integrated?
  - Is data consistent across operations?
  - Are there regulatory/compliance demands for how data is secured or where it is geographically stored?
  - Do mobile employees have the access and data they require?
- **For manufacturers, consider additional capabilities:**
  - Preventing production disruptions
  - Avoiding inventory stockouts
  - Tracking bills of materials
  - Managing large numbers of transactions
  - Communicating with and tracking supply chain partners
  - Predicting fluctuations in product demand; customer
  - For some customers, such as defense agencies – keeping data on site and limiting internet connectivity.

SELECTION

- **Only after manufacturing companies have performed an internal business assessment** and considered the variables associated with different deployment architectures should they begin to evaluate the specific functions and characteristics of different ERP solutions.
- **Consider a hybrid solution** that pairs on-premise applications with complementary cloud-based elements
- **Ensure that the general-purpose functions of an ERP suite are as capable and on point as possible**
- **Evaluate industry-specific functionality and built-in best practices;** look beyond core ERP functions and processes
- **Be prepared for a complex change management operation**

ACTION

- **Proper phasing of an ERP deployment is critical**
- **Establish clear priorities and schedules for:**
  - Management reviews and approvals
  - Employee training
  - Data migration
  - ERP module implementation sequences
- **Modify employee permissions and access rights to specific applications and data**
- **Monitor, evaluate, and modify**

Existing technology and data infrastructure

In most instances, it's impossible to assess the strengths and weaknesses of existing business operations and processes without also examining the IT infrastructure on which they run. Even manual processes usually have an IT component, as when a clerk keys paper invoice information into an electronic system of record.

Not surprisingly, an examination of the IT infrastructure often goes hand-in-hand with identifying a company's primary business pain points. While pain points can be associated with everything from budget limitations to skills shortages, a disproportionate share is likely to be directly linked to existing IT constraints, and may be caused solely by those shortcomings.

> Examining IT infrastructure often goes hand-in-hand with identifying your primary business pain points.

That's why companies need to map their current systems, workloads, and workflows, as well as the data their systems process, store, and transmit. This inventory exercise is designed to answer questions such as:

- Are systems and data siloed or well-integrated?
- Is data consistent across operations?
- Are there regulatory/compliance demands for how data is secured or where it is geographically stored?
- Do mobile employees have the access and data they require?

For some companies, answering these and dozens of other IT- and data-related questions will occur within the context of a broad digital transformation and modernization process. At many midsized companies, however, the objectives may be less lofty. Business and IT executives at these firms often will be focused on point objectives like fixing specific IT limitations or improving mission-critical operational functions and processes.

ERP architecture: on-premise, cloud-based, or hybrid?

Ten or 20 years ago, companies could concentrate primarily on functionality and cost when making ERP purchasing decisions. The emergence of cloud computing has added another significant variable that companies must now factor into their decisions.

The cloud deployment model offers many potential benefits. Still, those benefits are of little value if a cloud-based ERP solution is inadequate in some key functional areas or is a poor fit for a company's specific needs.

"Many cloud software publishers tout the cloud deployment model more than the functionality of their solutions," says John Hoyt, Partner and Senior Consultant at Next Level Manufacturing Consulting Group, a software consultancy focused on the manufacturing sector.

Eric Kimberling, CEO and Founder of Third Stage Consulting Group, agrees. "Cloud solutions often aren't as mature as on-premise software alternatives, and may have gaps in their functionality," he warns.

For many midsized companies, a hybrid deployment model may be their best architectural choice. With a hybrid model, certain mission-critical applications and data can reside on site. This on-premise infrastructure can then be paired with cloud-based elements that provide complementary services, connectivity for remote and mobile employees, integration with global supply chain partners, access points for customer interactions, and other external functions.

The hybrid approach also lends itself naturally to a modified best-of-breed model, which addresses the reality that no single ERP solution can be all things to all customers. With a hybrid model, companies can get much of the core functionality they require from an on-premise ERP suite. At the same time, they can supplement that suite with best-of-breed services and enhancements that extend and complement the core ERP capabilities.

In practice, the hybrid deployment model also matches the operational and infrastructure realities present in many midsized firms. Many of these companies have long histories and high comfort levels with on-site IT deployments and aren't willing or able to shift overnight to a full cloud-based model. With a hybrid approach companies can gradually add cloud functionality at their own pace, and establish an on-premise/cloud balance that best fits their needs.

Broadly speaking, the cloud and on-premise deployment models each embody a mixture of pros and cons. Among them:

Cloud computing strengths:

- Reduced capital and operational expenses
- Rapid solution deployment
- Anywhere/anytime access
- Open-ended scalability
- Reduced IT management burdens
- Automatic fixes and upgrades
- Rapid support for new technologies such as artificial intelligence and the Internet of Things.

Cloud computing weaknesses:

- Requires internet connectivity
- Data resides offsite and sometimes in distant and potentially noncompliant systems
- Customers must depend on the cloud service provider to meet required service levels, security, and other operational needs
- Costs of subscription cloud services can be difficult to analyzes and can exceed on-premise deployment costs over long periods.

On-premise deployment strengths:

- IT retains full control over operations, security, and other functions
- IT can install fixes and upgrades on its preferred timetable
- Sensitive data can remain sequestered and secured on site
- IT systems can be tightly and efficiently linked to on-premise physical operations, from inventory storage to shop floor machinery.

On-premise deployment weaknesses:

- IT is responsible for deployment, maintenance, upgrades, and security
- Midsized companies may have limited IT expertise
- Requires investments in server and storage platforms, which can be difficult and costly to scale
- Companies may not have easy access to cutting-edge or supplemental technologies and features.

ERP functionality: Blending general-purpose and industry-specific capabilities

After you've performed an internal business assessment and considered the variables associated with different deployment architectures, you can begin to evaluate the specific functions and characteristics of different ERP solutions.

"Once you make the strategic decisions, the ERP decisions tend to fall into place," says Kimberling.

Some functional areas, including accounting and financial planning, are common to all types of companies. That said, there can still be significant variability in the capabilities, intuitiveness, and other characteristics of these general-purpose functions.

As such, it's important to ensure that the general-purpose functions of an ERP suite are as capable and on-point as possible. Still, these common functions aren't likely to be the sources of significant competitive advantage or differentiation. That is, a company with a stellar accounts payable system isn't likely to leverage that capability to great advantage over a competitor that has only a marginal accounts payable app.

Where some ERP suites distinguish themselves is in their industry-specific functionality and built-in best practices. For midsized manufacturing companies, these vertical sector capabilities may be the most valuable elements of a multifunction ERP suite.

Unlike insurance companies or retailers, manufacturers and their IT systems must deal with a wide range of physical equipment, materials, and manual activities. As such, they require ERP solutions that can interface with shop floor machinery, inventory operations, and other on-site systems. Externally, manufacturers need visibility into and integration with their supply chain partners as well as with distributors, wholesalers and other customer-side businesses.

At a high level, the leading objective among many manufacturing companies is to increase the automation of their core workflows. In fact, in a Sage-sponsored survey of 100 midsized discrete manufacturers, the most important ERP feature—cited by 68% of the respondents—was eliminating manual processes and workarounds.

In a different Sage-sponsored survey, Forrester Consulting polled more than 300 technology decision-makers at small and medium-sized manufacturers and distributors about their business and ERP strategies. (These two industry sectors share many operational characteristics and needs.) One of the survey's main findings: "... companies are taking a hybrid approach—mixing on-premise and cloud-based solutions for different systems—as they try to right-size their technology strategies for the best overall outcome."

> "Once you make the strategic decisions, the ERP decisions tend to fall into place."
>
> **Eric Kimberling**
> Third Stage Consulting Group

Forrester Consulting also asked the respondents about their top business priorities. For the manufacturing company respondents, those priorities were:

1. Reduce costs
2. Drive revenue growth
3. Improve customer experience
4. Improve products
5. Business agility

Below these top-line goals, midsized manufacturers need ERP solutions that can support a wide range of operations and functions critical within their industry sector. Among their many needs: preventing production disruptions; avoiding inventory stockouts; tracking bills of materials; managing large numbers of transactions; communicating with and tracking supply chain partners; predicting fluctuations in product demand; and—for some customers, such as defense agencies—keeping data on site and limiting internet connectivity.

Ideally, a manufacturing ERP solution will also interface and integrate with computational and physical processes. For example, the solution might support scanning technology, allowing employees to scan such items as inventory bin bar codes or shop floor work tickets.

In the latter example, workers wouldn't have to manually enter when they start and finish jobs. Instead, by scanning in and out on a work ticket, their labor time and costs can be automatically recorded. At the same time, the materials used in the manufacturing process can be automatically removed from inventory lists and, if desired, automatically reordered.

Best-practice workflows built into an ERP system can give manufacturers a way to do more than simply digitize and automate current operating methods.

Inextricably intertwined with the functionality of many ERP solutions are best-practice workflows. Having tested and proven processes built into the ERP systems themselves can give manufacturers a way to do more than simply digitize and automate their current operating methods.

In this regard, ERP software needs to strike something of a balance. It shouldn't force manufacturers to alter their processes if they don't want to but should provide them with a path to transition to more efficient operations. Such process shifts can be challenging but making them can be well worth the effort.

"Nothing makes me crazier than customers trying to make a new ERP app behave just like their old operations," says Hoyt.

Looking beyond core ERP functions and processes

When evaluating ERP solutions, their core, off-the-shelf functionality and built-in best practices are just some of many factors that midsized companies need to consider. Among the others:

- **Ease of customization:** Even if they leverage an ERP suite's built-in best practices, most companies will want to fine-tune a solution for specific needs. Those customizations can range from the sequencing of workflow stages to the fields and tabs displayed on electronic forms. Ideally none of this customization will require formal programming, and the changes will persist through future ERP expansions and upgrades.

- **Ease of integration:** ERP suites typically must integrate with legacy solutions as well as with complementary applications and services. Some platform architectures are more open than others, and ease of integration can be among the most critical characteristics of an ERP solution. More than one-quarter of 703 IT and business decision-makers surveyed by IDG said one of the biggest challenges they faced in their digital business initiatives was "lack of integration of legacy systems with new applications."

- **Data management:** ERP suites should provide tools to help companies collect, clean, and transform existing and future data that will be shared by the various ERP modules. Establishing a common database of accurate and current data is one of the biggest benefits gained by transitioning away from discrete and siloed applications to a multifunction ERP solution. Thanks to common data standards, creating such a shared database is easier today than in the past. However, the difficulty of reaching that unified state can vary greatly depending on the quality, location, and variability of a company's existing data resources.

- **Ease of use:** Intuitive user interfaces and common-sense workflows can greatly increase the speed at which employees learn and reach full productivity with a new ERP system.

- **Service and support:** These capabilities can come from both the ERP vendor itself as well as from a network of resellers, system integrators, and other partners. The most intense support is required in the upfront stages of a deployment. That's when the solution must be fine-tuned to the company's needs and integrated with other systems, and when users must be trained on the new platform. Post-deployment support, break/fix, and other services are also critical, however—and can vary considerably among ERP suppliers in speed, quality, and cost.

- **Partner ecosystem:** As noted earlier, no single ERP vendor can be all things to all people. It will need consulting, implementation, and application partners—both on premise and in the cloud. It's important to look beyond the walls of a specific ERP provider to evaluate the breadth and depth of its partner ecosystem.

Establishing a common database of accurate and current data is one of the biggest benefits gained by transitioning away from discrete and siloed applications to a multifunction ERP solution.

Executing an ERP migration

Companies that go through the systematic evaluation and selection process described will greatly increase their odds of a successful ERP implementation. Once they reach the deployment phase, they must be equally disciplined.

Deploying a new ERP solution is a complex change management operation that affects people, processes, and technology. Notably, IDG's 2019 State of the CIO survey found that change management was the second-most-needed skill required to support digital transformation initiatives, trailing only technology integration and implementation skills.

ERP deployments require companies to establish clear priorities and schedules for management reviews and approvals, employee training, data migration, ERP module implementation sequences, and a number of other activities. For many midsized companies, just getting started can require a fair amount of up-front work. "It may take three months or more just to rationalize inventory and get it under control," says Hoyt.

Meanwhile, employees aren't only learning a new software package—they're learning new processes and coming to grips with new operational realities. After an ERP deployment, "it's no longer just me managing my own spreadsheet," notes Kimberling. "I'm now touching enterprise-wide data and need to think differently about how I'm doing my job."

The cross-company reach of ERP has another ramification: It means organizations may need to modify employee permissions and access rights to the applications and data that are newly within their reach.

Given all of the moving parts, it's unwise to approach an ERP deployment as a forklift, one-and-done process. "Proper phasing of an ERP deployment is critical," says Hoyt. "For example, a manufacturer should be automating workflows and gaining control of their inventory as a starting point. Some functions, like capacity scheduling, may not help if the basics aren't in place."

A staged approach makes sense given that both business needs, and the ERP solutions themselves, will be in a constant state of change—sometimes minor, sometimes sweeping. "I believe in incremental progress and continual improvement," says Graf. "You solve one problem, and then move on to the next."

Fortunately, there has been one significant change on the landscape that can help to mitigate ERP deployment challenges: cloud computing. Even if the core ERP system is deployed on premise, much of the implementation, customization, and training can be performed by reseller partners and others remotely via the cloud. And, of course, cloud-based elements that make up part of a hybrid ERP solution can be quickly brought online once the core ERP applications are deployed on site.

"Proper phasing of an ERP deployment is critical. Some functions, like capacity scheduling, may not help if the basics aren't in place."

John Hoyt
Next Level Manufacturing Consulting Group

Modern ERP: A prescription for success

Moving to a modern and multifunction ERP suite can seem an intimidating prospect to a midsized company. How could it not when, as Graf notes, it's equivalent to performing heart surgery on the business?

A digital transplant is just what some companies desperately need, however. Many midsized companies are struggling with aging IT solutions and clogged business processes, leaving them gasping to keep pace with fitter competitors and stressful market demands. For these companies, a modern—often hybrid—ERP system is just what the doctor ordered.

Companies can greatly lessen the strain of the ERP journey if they keep their business needs and objectives top-of-mind throughout the process. Business considerations, rather than technological sparkle and promise, must inform everything from their initial pain point and infrastructure analyses to their ERP selection and deployment decisions.

By the time they get around to evaluating ERP candidates, companies should have a good sense of their top priorities, their core operational goals, and their preferred deployment model—on-premise, cloud-based, or a hybrid blend of the two. And, beyond the ERP suite's general-purpose and industry-specific functionality, companies must consider everything from the inclusion of best-practice processes to the ecosystem of partners surrounding any given solution.

Sage, a leading and long-established accounting and ERP software provider, offers a solution tailored specifically to the needs of midsized manufacturers—the Sage 100cloud. A hybrid solution that pairs on-premise applications with complementary cloud-based elements, the Sage 100cloud provides the best of both worlds, and also combines world-class accounting and other general-purpose functionality with powerful, vertical-sector features and processes.

Ready to help your business perform at its best? Find out what Sage 100cloud will do for you.