



THE DEFINITIVE GUIDE TO MANUFACTURING ERP

HELPING MANUFACTURERS THROUGH THE SOFTWARE SELECTION PROCESS

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WHY SHOULD I READ THE DEFINITIVE GUIDE TO MANUFACTURING ERP?



Manufacturers have one thing in common: the desire to achieve higher revenue and faster growth. But you might struggle to align your people, processes, and technology to achieve these goals.

This Definitive Guide to Manufacturing ERP will answer all the questions you have, no matter where your company is in the ERP selection process – even if it has only crossed your mind.

This guide shows you how manufacturing ERP can help your company, how to select the right solution for your unique operations, and what investments are required for success. It will also explain:

- Why the need for manufacturing ERP is more important than ever
- How Cloud manufacturing ERP differs from on-premises solutions
- The common features and functions of manufacturing ERP
- How to build a business case to convince internal stakeholders to make the investment

We've also included common questions that you can use when talking to manufacturing ERP vendors to ensure you make the right decision for your manufacturing operation.

We hope this guide will be just what you need to help you along the complex journey of evaluating manufacturing ERP.

After all, you already know that modernizing your manufacturing operations will make you more efficient, competitive, and profitable.



WHAT'S WITH ALL THE BUZZWORDS?

It's as if the pressures of running a manufacturing operation weren't enough. The buzzwords infiltrating your market abound, creating confusion and added stress. Manufacturing 4.0, Industry 4.0 the Internet of Things, and the like muddy the path of your strategy. **Where do you start?**

It's no doubt the speed of today's technology is not only breakneck, but it's also exciting. Today's technological advances are serving as the catalyst to enable efficiency, productivity and innovation like never before.

You see, these technologies, when applied in the right place, at the right time, give you the tools to

relieve manual and inefficient processes, so you can get on to the real work of your strategy.

When you're considering everything in front of you, let's put one thing to rest. That is, **technology defines how data will be managed** – a LOT of data. And when you break it all down, it's likely the data that is causing all the havoc.

“Technology makes data work, and that’s the whole point of ERP.”



WHAT IS MANUFACTURING ERP?

MANUFACTURING ERP DEFINED

Let's begin with a definition:

The definition is that simple. ERP materializes as business software, designed to use technology to automate your processes and manage your data. The trick is, software design must work for your unique operations. However, all ERP software is not created equally.

The problem is the generic definition.

ERP ≠ ERP

Vendors add to this confusion by lumping everything together into one acronym: ERP. That said, let's step away from this term and begin with the problems you are trying to solve. By working backwards, you'll be able to narrow down the functions and features you need.

In production manufacturing, you might agree that among the most important are:

1. Production Control
2. Integration
3. Flexibility
4. Industry Specific



“Enterprise resource planning (ERP) is defined as the ability to deliver an integrated suite of business applications. ERP tools share a common process and data model, covering broad and deep operational end-to-end processes, such as those found in finance, HR, distribution, manufacturing, service and the supply chain.”

Gartner

MANUFACTURING ERP DEFINED

Manufacturing ERP “Must Haves” for Production Manufacturers:



PRODUCTION CONTROL

Your needs are much more specific than simply “managing your enterprise from end to end.” You need to control your production floor and manufacturing operations with visibility into what’s really going on with your master schedule and the utilization of the capital equipment you spent your hard-earned money on.

With these challenges in mind, you’ll want to seek an ERP with powerful **production functionality**. With your operations and production data automated, you have exceptional visibility of problems in real-time, or before they become unmanageable, and dynamic control of the heart of your operation.



INTEGRATION

Rework is inefficient and error-prone. You should never have to take information out of the computer, just to put it back in. What you need is the integration of your applications, so you never have to manually enter information from one application to another.

Software with open API ensures that you have the ability to integrate your business software. Yet another confusing acronym, APIs simply means your software applications will talk to each other and connect your data. In other words, your ERP solution should connect to the other applications you rely on to run your business.

Integration ensures you are using technology to its fullest extent and it eliminates re-entry of critical data -which promotes both efficiency and accuracy.



Keep reading for more manufacturing ERP “Must Haves”.

MANUFACTURING ERP DEFINED

Manufacturing ERP “Must Haves” for Production Manufacturers:



FLEXIBILITY

Flexibility is incredibly important when you’re seeking actionable business intelligence. Why be stuck with standardized reporting that inundates you with data if all you need to do this quarter is keep your eye on a hand-picked group of KPIs?

A flexible solution means you can get reporting on things you decide are important, possibly seeing which jobs are delivering better margins. Spotting trends is another important ability for small- and mid-sized manufacturers who are seeking to become leaner and more profit-oriented.

Remember that the entire point of flexibility is to give you a more precise and effective solution that recognizes the uniqueness of your operations, without making your life more difficult.



INDUSTRY SPECIFIC

You may be tempted to overlook this point, however, software designed for your specific industry carries important advantages you may not have considered.

Software fit to your industry means the important details like the quoting process are defined the way production manufacturers process and manage quotes. And units of measure are useful for what you actually use. These details may seem small but without them, you’re constantly trying to fit a mold that wasn’t formed for you.

One of your first considerations will be to make sure the ERP software you select is actually designed for your industry. If it’s not, the difficulty you will experience trying to make it “fit” will inevitably result in your wasted time and effort. Ask this question as you begin your search.

It's no surprise why you may be confused in what seems to be innumerable ERP software choices.

However, our experience in software tells us that what production manufacturers need most is production control, software applications that communicate with each other and share data, the flexibility to adapt to your unique manufacturing methods, and designed for your industry.



Now let's take a look at who uses manufacturing ERP.

SO, WHO USES MANUFACTURING ERP?

With the emergence of new technology, manufacturers of all sizes, can now benefit from a full-featured manufacturing ERP.

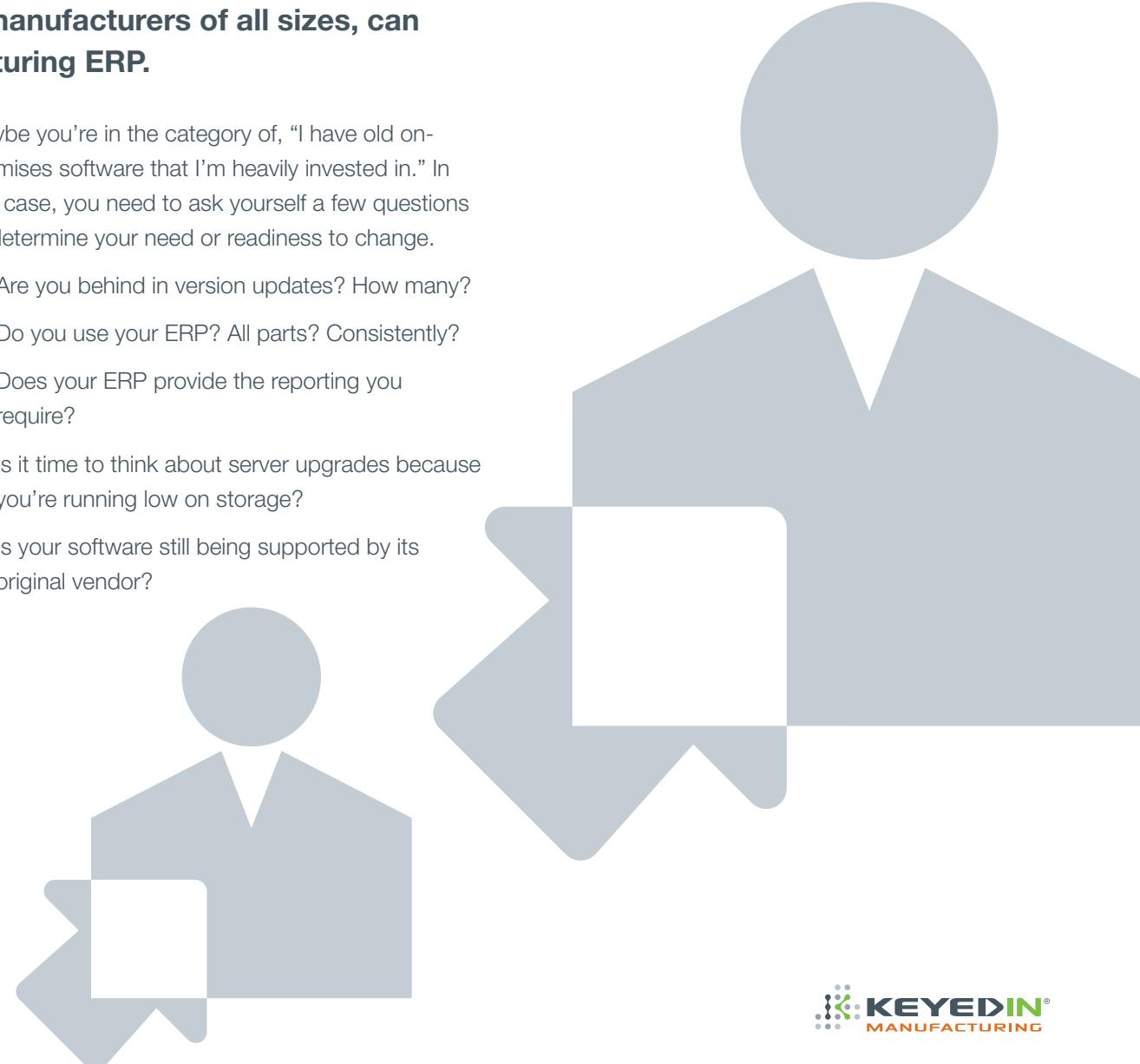
Historically, ERP was reserved only for those large companies with multi-million dollar budgets for large capital purchases. These same manufacturers also have a big staff of IT professionals ready to conquer the complexity of software installation, server acquisition and ongoing maintenance, and the long-term maintenance required with on-premises software.

As a result, smaller to mid-size manufacturers were left to their own defenses. Most used homegrown solutions or a combination of paper, spreadsheets, and various other means to keep track of the most important aspects of their operations.

But the “old” way of manually managing production operations does nothing for the race toward competitiveness and agility in the evolving manufacturing industry.

Maybe you’re in the category of, “I have old on-premises software that I’m heavily invested in.” In this case, you need to ask yourself a few questions to determine your need or readiness to change.

- Are you behind in version updates? How many?
- Do you use your ERP? All parts? Consistently?
- Does your ERP provide the reporting you require?
- Is it time to think about server upgrades because you’re running low on storage?
- Is your software still being supported by its original vendor?



WHAT DOES MANUFACTURING ERP SOLVE?

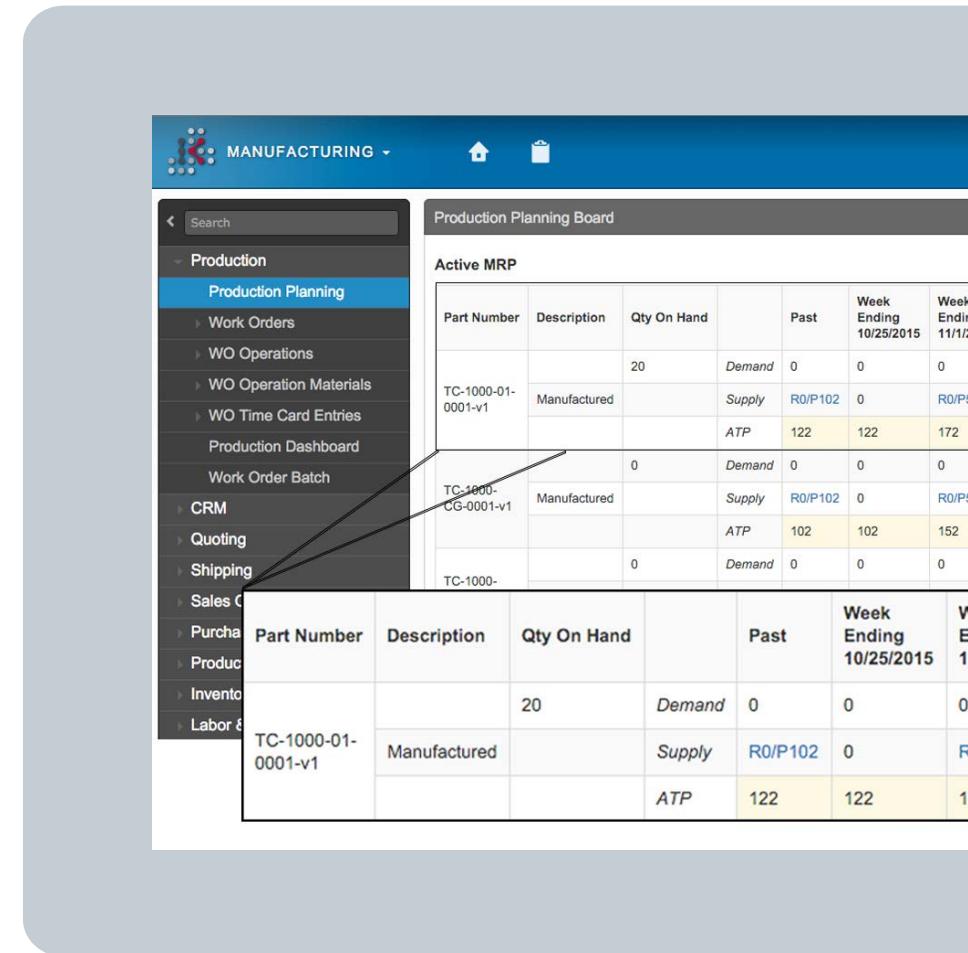
In the most simplistic sense, manufacturing ERP aggregates and computes your critical data allowing you to manage your processes. You're able to see the real-time information required to run your operations, correct bottlenecks, identify inefficiencies, understand profitability, and make better decisions.

Beyond the literal benefits, manufacturing ERP enables modern manufacturing processes that are essential to remaining competitive and profitable in the manufacturing industry by protecting your profitability, timeliness of orders, just-in-time inventory management, and so on.

One of the hallmarks of manufacturing ERP is data accuracy. Essentially, one input of data means that single input carries from process to process. With no re-entry, your potential for error significantly declines.

Enterprise resource planning (ERP) is a valuable and effective tool for manufacturing firms. By streamlining key processes, ERP helps you to:

- Achieve production control
- Operate more efficiently
- Centralize operations
- Gain visibility of operations
- Report on performance and analyze results
- Improve bottom line growth
- Accurately maintain inventory



The screenshot displays a software application window titled "MANUFACTURING". On the left, a sidebar menu lists various modules: Production (selected), Work Orders, WO Operations, WO Operation Materials, WO Time Card Entries, Production Dashboard, Work Order Batch, CRM, Quoting, Shipping, Sales Contracts, Purchasing, Production Planning (highlighted in blue), Inventory, and Labor & Time. The main content area is titled "Production Planning Board" and "Active MRP". It shows a table with columns: Part Number, Description, Qty On Hand, Demand, Supply, ATP, Week Ending 10/25/2015, and Week Ending 11/1/2015. Data rows include TC-1000-01-0001-v1, TC-1000-CG-0001-v1, and TC-1000-. A callout box highlights the first row for TC-1000-01-0001-v1, showing values: 20, Manufactured, 0, R0/P102, 122, 122, 0, 0. A tooltip for this row provides a detailed breakdown of the columns: Part Number (TC-1000-01-0001-v1), Description (Manufactured), Qty On Hand (20), Demand (0), Supply (R0/P102), ATP (122), Week Ending 10/25/2015 (122), and Week Ending 11/1/2015 (0).

WHAT DOES YOUR TEAM GAIN WITH ERP?

Manufacturing ERP is comprehensive business software designed to manage your manufacturing operations from quote to cash, giving every facet of your organization one source of the truth for real-time visibility to run more efficient and profitable operations.



QUOTING & ESTIMATING

BEFORE: I'm constantly under-estimating the cost and time required to complete a customer order. My estimates are usually profitable.

- Maximize profit margins with real-time visibility of material, production, and shipping costs
- Create profitable and accurate estimates using historical quote information with preferred vendor pricing and real-time margin calculations
- Understand how past estimates have performed against revenue expectations

AFTER: Real-time operational cost and production information makes creating accurate, profitable estimates easy, ensuring every work order is a profitable one!



PRODUCTION

BEFORE: I can't ensure that our capital equipment is being fully utilized. Sometimes it sits idle.

- Automate production schedules with accurate capacity and inventory information
- Gain visibility of available resources and inventory for work orders
- Empower production team members with access to real-time input process information and production statuses
- Connect inventory with production with one solution for managing all production needs

AFTER: Production Control is achievable because all the critical information you need to manage your supply, demand, and processes are available to you in real-time, at the touch of a button - giving you maximum resource and equipment utilization.



PURCHASING

BEFORE: I never know exactly when I should be placing material orders for certain work orders.

- Eliminate manual tracking of inventory
- Purchase the right materials at the right time for production schedule needs - avoid costly last minute orders
- Manage complex purchase orders with multiple preferred vendors - capitalizing on quantity breaks and vendor-specific pricing
- Gain visibility into current and future production work orders in one comprehensive view

AFTER: Take lean manufacturing to a new level with only having the inventory you need on hand and buying more when demand calls for it.

WHAT DOES YOUR TEAM GAIN WITH ERP?



SCHEDULING

BEFORE: I'm constantly to blame for late work orders or double booked machines.

- Gain visibility of work order timing for more accurate scheduling and delivery
- Minimize scheduling changes with real-time views of production scheduling
- Make quick changes to production schedule for prioritization of important work orders
- Maximize production resources with little to no downtime

AFTER: With complete visibility of operations, accurately schedule work orders based on priority, processing time and inventory available.



SALES/CRM

BEFORE: I struggle to track customer orders to effectively communicate order statuses.

- Develop real-time reports and dashboards for accurate sales pipeline meetings
- Reduce double entry of data and eliminate manual tracking of prospects and customers
- Respond more accurately to customer requests with a single view of all orders and delivery time
- Fill operational gaps with one solution connecting all organizational departments

AFTER: Manage customer requests in real-time with immediate access to critical customer information and order statuses.



SHIPPING

BEFORE: I never know a work order is ready to ship until it hits the loading dock.

- Create a mobile picklist on tablet or desktop
- Easily select multiple shipping locations for your customer orders
- Communicate shipment status in real-time
- Ship line items by release schedule

AFTER: Anticipate work order completion with visibility of real-time work order statuses to ensure on-time delivery for customers.

WHAT DOES YOUR TEAM GAIN WITH ERP?

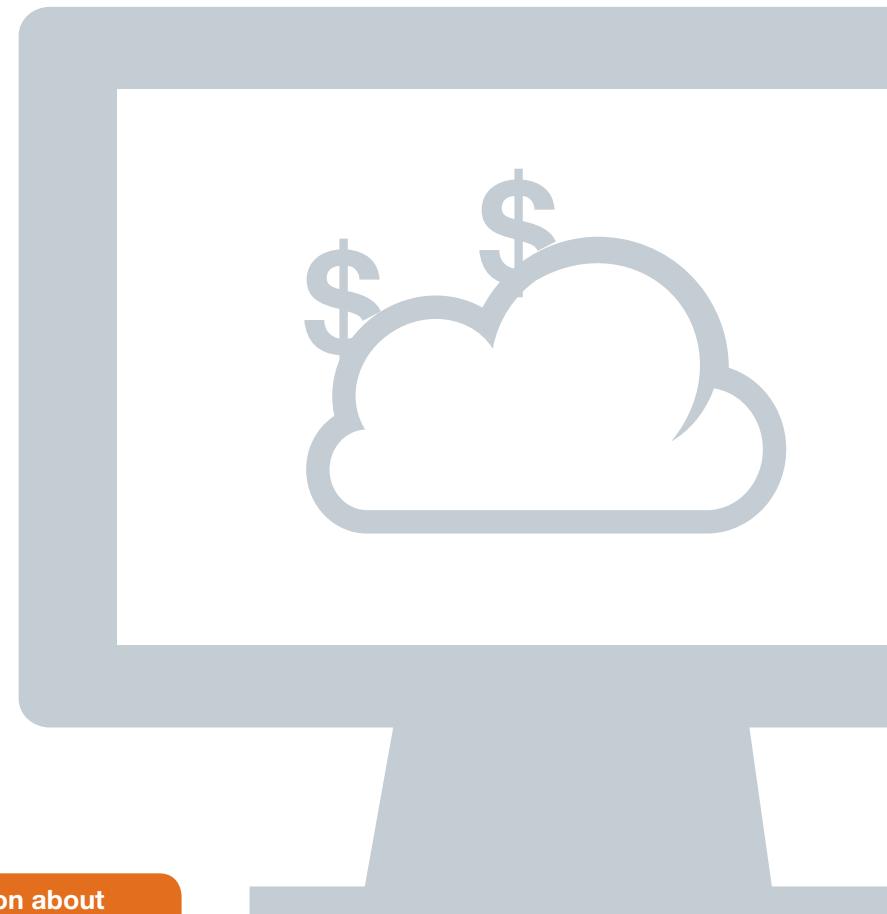


ACCOUNTING

BEFORE: I am constantly trying to connect the dots of disconnected financial data from different sources.

- Improve the quality of financial forecasts with real-time financial and operational data
- Act on more accurate sales information with visibility from quote to cash
- Gain more reliable business metrics with a single integrated solution
- Rely on true audit logging and controls
- Improve overall business processes with consistency to streamline operations

AFTER: With real-time data from shopfloor to finances, greater profitability becomes more attainable through accurate financial data.



For more information about
a powerful Cloud accounting
software integration,
see page 28.

WHAT MANUFACTURING ERP IS NOT

To be effective, the utilization of ERP must be adopted throughout your facility, from the shop floor to the executive offices.

To be perfectly transparent, ERP alone is not the be-all, end-all. You must show your team how the software makes their job easier and more efficient so they can experience the benefits of what is required of them.

It has been our experience that involving your team in the entire process, from selection through implementation, dramatically increases your eventual success. We will cover that topic in the "How to Sell ERP Internally" section later in this guide.

Now you know the benefits of manufacturing ERP, let's cover a few important details about using it. ERP will not:

1. Eliminate the need for set operational processes
2. Eliminate the need for people to configure, operate, and maintain data
3. Eliminate change management as part of the implementation process
4. Eliminate attention needed on employee training



WHAT MANUFACTURING ERP IS NOT

ERP alone will not:

1. Eliminate the need for set operational processes

With an ERP solution, having specific operational process steps for manufacturing operations will only enhance your ERP solution. By setting guidelines, your employees and the solution will be able to work hand-in-hand to accomplish required tasks in the operational process. With an all-in-one solution like an ERP, manufacturers are enabled with technology to enhance the enforcement of those specific processes keeping operations lean and efficient, leading to more profitability and productivity.

2. Eliminate attention needed on employee training

Although the user interface of ERP is typically very adaptable, it is still necessary to train your manufacturing team. Not only will this eliminate hiccups along the way once your entire team is using the solution, but it will also ensure that your team is taking advantage of the entirety of the solution. Empowering your team with software training will save you time and money down the road.

3. Eliminate change management as part of the implementation process

Change is never easy in an organization, and new software can sometimes be the hardest. With ERP, the change process is no different. That's why the encouragement and support of the implementation from your entire manufacturing team is crucial to the success of your ERP. One thing to note is that an ERP system doesn't just help an executive make more informed decisions, but it makes everyone in the company's job easier and more efficient. Stay focused on that outcome.

4. Eliminate the need for people to configure, operate, and maintain data

An ERP system is only as good as the data that is entered. A common misconception with technology is that it will replace the need for manpower in a manufacturing facility. This is false, employees are key contributors to successful ERP solutions. Whether you are working on the shop floor or in the executive office, the information entered must be accurate to allow production and process information to deliver the greatest functionality and alleviate current manufacturing operational headaches.

IS IT TIME FOR YOU TO UPGRADE?

After reading about what manufacturing ERP is and does, maybe it has you thinking... Does manufacturing ERP make sense for me?

Here are 6 signs you need manufacturing ERP:

1. Complicated processes are managed with manual systems, or worse, spreadsheets –

Whether it's tracking production on a whiteboard or passing a clipboard through a specific job lifecycle, manual errors are likely to happen and very difficult to catch until a job is completed incorrectly. Those errors are costly.

2. Your existing system is outdated – Old rigid and slow systems can leave you frustrated and struggling to keep up with competitors. Think about your existing system...Does it really work for you? Are you behind on numerous version updates?

3. Your processes are inconsistent – Ever feel as if your business is improvising when there should be formal plans in place? It's hard to stay competitive in the evolving manufacturing industry when you are constantly "making it up" as you go!

4. You lack visibility of performance – How can you improve performance if you don't have clear view of it? Without key operational information or accurate cost reports, how are you able to see whether you're achieving your goals or not.

5. You find some processes are not being managed at all – Some important operations might already be totally forgotten about, and in the meantime costing you a pretty penny. Identifying those unmanaged processes make for more efficient and reliable operations.

6. Your departments are disconnected – Does your manufacturing team communicate with one another effectively? If not, disconnected departments often lose time trying to "connect the dots" rather than focusing on getting the job at hand completed.

We could go on – and the likelihood that you're already creating an extended list in your head right now is very high.



Bring a list like this to the ERP vendors you are evaluating. Your chosen vendor should help you develop a plan to address these concerns.

UNDERSTANDING CLOUD MANUFACTURING ERP

WHY CHOOSE CLOUD MANUFACTURING ERP

So far you have learned that Cloud Computing is the delivery of Software as a Service (SaaS) and accessed simply by using a web address, Internet connection and computer - whether desktop, laptop, or mobile device.

The primary drivers of this move to the Cloud include cost control, end-to-end process visibility, and anytime, anywhere access to critical business information.

More importantly, new technology is removing formerly rigid bounds of functionality that made traditional on-premises ERP solutions complex, difficult to manage and not widely adopted by key managers and team members in the manufacturing firm -including shop floor technicians.

The Cloud offers significant advantages over traditional or legacy on-premises ERP software, including:

- Lower cost
- Supreme scalability
- Configurability
- Improved user adoption
- Rapid deployment
- Reduced risk
- Anywhere, anytime access
- Frequent functionality upgrades

Exclusively with Cloud, the majority of the responsibility of software delivery shifts to the vendor. In other words, your vendor manages the software environment, updates, development, data center relationship, and back-up/disaster recovery services, to name a few.



WHY CHOOSE CLOUD MANUFACTURING ERP

Here's how the responsibility shifts from you to the Cloud ERP vendor:



Imagine now that your IT team can focus on far more important business priorities.

WHY CHOOSE CLOUD MANUFACTURING ERP

The benefits of the Cloud do not end here, however. The Cloud enables Visibility, Scalability, Accessibility, Security and improved Usability.

VISIBILITY

You gain competitive advantage with real-time views of production, inventory, reports, dashboards and more.

Let's face it. Visibility gives you a competitive edge. When your data, process, and schedule are managed by a comprehensive ERP software solution, important tasks like inventory management and production control get more efficient, which also means more profitable. This is what the phrase "one source of the truth" means when it comes to data. You can rely on the information you see - information you rely on to run your shop floor.

Cloud technology allows you to communicate and collaborate with the power of accurate and timely data. Sometimes this means you're mobile – in the field or with a customer. And of course, only Cloud ERP gives you access to your organization with a simple Internet connection.

Visibility enables you to:

- Drill down into production costs to make line-by-line comparisons, recognize trends, or compare suppliers.
- Review estimates to find patterns that spell success - learning from your wins and from the ones that got away.
- Scrutinize work orders to determine where the problem is, what caused a delay, or why your customer is dissatisfied.
- Keep track of overall performance with automated reporting so you can easily compare quarter to quarter, year to year.

MOBILITY

You can access your ERP anytime, anywhere, and on any device.

It's more than just the ability to view a dashboard while you're on vacation. True mobility improves your business. When your primary goal is revenue generation and customer retention, you'll want your team equipped with the data they need to out-compete your competition and keep your production engine running smoothly. Here are just some of the ways you may want to access your data when you're not in the office:

- Set accurate delivery date expectations with your customer while you're taking an order.
- Determine available to promise dates based on accurate knowledge of your production schedule.
- Quickly rearrange the production schedule to accommodate the most important order you'll fulfill this year.
- Beat your competition with a fast and accurate quote in response to an RFQ.

WHY CHOOSE CLOUD MANUFACTURING ERP

SCALABILITY

You have your eye on your growth initiatives.

You have outfitted your entire organization with your vision and the associated tactics to grow – grow production, grow orders, grow revenue. “Up and to the right” is the goal for all measurements related to growth and your entire organization must be nimble, agile and prepared to react when the market responds. This means your entire organization, including the technology that runs it.

In the past, on-premises software was purchased just ahead of your plan in terms of package size. Number of users, capacity for storage, and so forth had an upper limit. When you outgrew your software, it was time to go back to the capital expense review board to gain approval for an entirely new package. And the expense of this was not insignificant because it involves new equipment, installation, and downtime.

Scalability today also means computing speed. When your software’s performance slows down today, you may have to consider adding a server to manage the additional data that’s causing the slowdown. That’s not the case with native Cloud ERP. Your ERP vendor manages the resource load so you do not experience performance issues when your resource needs increase.

SECURITY

Data security you can trust.

In an amazingly short period of time, even by the lightning-fast standards of technology evolution, the Cloud has become a ubiquitous resource, both for consumers and for businesses. Nearly 90% of companies now use the Cloud in some form, and it's easy to understand why: Using Cloud resources gives companies the power to rapidly scale up operations and add new capabilities without making huge upfront infrastructure or on-premises application investments.

But despite the widespread adoption of the Cloud, some company leaders still don't quite trust the cloud, especially when it comes to handling business-critical applications and data. They point to headlines about high-profile data breaches as evidence that information housed on the Cloud isn't safe.

Is this a reasonable fear?

The short answer is no. It certainly makes sense for company leaders to be concerned about data breaches and to take all reasonable precautions to protect business and customer information. But it doesn't make sense to view the Cloud as a uniquely vulnerable technology or to believe that

the information stored in on-premises servers at the typical enterprise is safer than data stored at a secure Cloud location. In fact, the opposite may be true.



WHY CHOOSE CLOUD MANUFACTURING ERP

IT INFRASTRUCTURE COSTS

Your IT team can now focus on more value-added projects.

Cloud ERP software cuts IT infrastructure costs out of your organization. Period. However, this point is only applicable when a manufacturer has an existing IT infrastructure - which may not be the case in a small- or lower side of medium-sized manufacturer. Your IT infrastructure today may be a single individual or the college friend of the owner who is in IT training and helps fix your computers in their free time.

Whatever your situation is today, the Cloud gives you access to manufacturing software not previously available (due to complexity or cost) while feeling assured that the infrastructure responsibility is carried by the software provider (and therefore never becomes your problem). Either way, the reduction in the actual cost of IT or the headache of software installation are no longer an issue. And you are constantly running your operations on the most current software version.

DISASTER RECOVERY

When you didn't expect that fire, flood, or other terrible disaster.

You never adequately plan for disaster – it is human nature. But when it comes to your critical business processes, what would happen to your operation if the whiteboard that contained your most important notes and drawings of your new, innovative idea or the banker boxes that held your historical delivery data were destroyed in a flood? We know exactly what would happen if those were in the Cloud. You would simply walk to another computer, login and access your data. It really is that simple. In other words, you don't have to worry about a lack of disaster planning as it has been done for you by your vendor.



HOW CLOUD ERP DIFFERS FROM ON-PREMISES?

Whether you're convinced you need ERP or not, a few definitions will still be necessary as you determine your course of action. That is the never-ending question between how the software is delivered to your facility.

In this, you have 3 choices: Cloud, Hosted, or On-Premises software. And I bet you would love to hear a no-nonsense definition to help you understand the differences. **Well read on.**

NATIVE CLOUD	HOSTED CLOUD	ON-PREMISES
Software built in the Cloud for the Cloud – providing powerful fast software accessible anytime, anywhere from any device	Software built from traditional software source code adapted to be accessible via the internet	Traditional software built from source code and accessible when company servers
Seamlessly integrate with other business software using open APIs	Integrations are limited and often require duplicate entry regardless	Rigid software doesn't allow for business software integrations
Automated upgrades give access to the latest version everytime	Software upgrades happen in waves – often requiring downtime	Software upgrades cost extra; customizations don't transfer over
New Software with Modern Software Deployment	Old Software with Modern Software Deployment	Old Software with Rigid Old Software Deployment

BUYING CLOUD MANUFACTURING ERP

SELLING CLOUD MANUFACTURING ERP INTERNALLY

Now that you're convinced that your organization needs a new ERP solution, it's time to get your team to buy-in. And to ask questions. You need to make sure the ERP you select works for them and addresses their challenges. In the pages that follow, you'll find a handy checklist of benefits common to each functional area in your facility.

How to position for each executive:

CEO/OWNERS

Make better decisions with real-time organizational information

- Visualize profitability and manage costs in real-time
- Improve revenue predictability with visibility into critical margin-based job costing reports
- Empower workforce with technology they need to support business strategies
- Align the organization with process efficiency and a single solution for accurate business data
- Out-execute the competition by always using the latest ERP software

CFO

Accurately measure ROI for the organization

- Gain visibility into profitability and manage costs in real-time
- Identify areas of targeted cost reductions
- Set and maintain margins set by company
- Gain anytime, anywhere access to sales reports and expected revenue

CIO

Connect business strategy with technology

- Minimize the impact of ongoing expenses related to ERP
- Allow your software provider to carry the responsibility of maintenance of software
- Connect business processes with technology using open APIs
- Mitigate your risk by implementing technology backed by data security providers who specialize in the latest security trends

SELLING CLOUD MANUFACTURING ERP INTERNALLY

How to position for your manufacturing team:

PRODUCTION MANAGER

Immediate visibility into production demand requirements

- Automate your production schedule with accurate capacity and inventory information
- Proactively manage material shortages, labor overages and production schedule changes
- Reduce manual entry and paperwork with production status and material reports via dashboards
- Quickly identify and relieve production bottlenecks
- Accurately view live ATP data to adjust potential problems before they occur

SUPPLY CHAIN MANAGER

Maintain the right balance of inventory

- Take advantage of volume pricing with dynamic control of vendor accounts
- Rely on automated revision control of purchase orders
- Realize cost savings by purchasing the right materials at the right time for production schedules
- Eliminate manual tracking of inventory, saving time when creating inventory reports and planning for production schedules
- Connect production with supply chain with one version of accurate production status information

OPERATIONS MANAGER

Unlock strategic innovation and production excellence

- Minimize the impact of ongoing expenses related to ERP
- Ensure facility, equipment and resources are being fully utilized
- Reduce cycle time with end-to-end visibility
- Identify opportunities and gain access to justification needed to acquire additional resources like tooling or team members

SELLING CLOUD MANUFACTURING ERP INTERNALLY

How to position for your manufacturing team:

ESTIMATOR

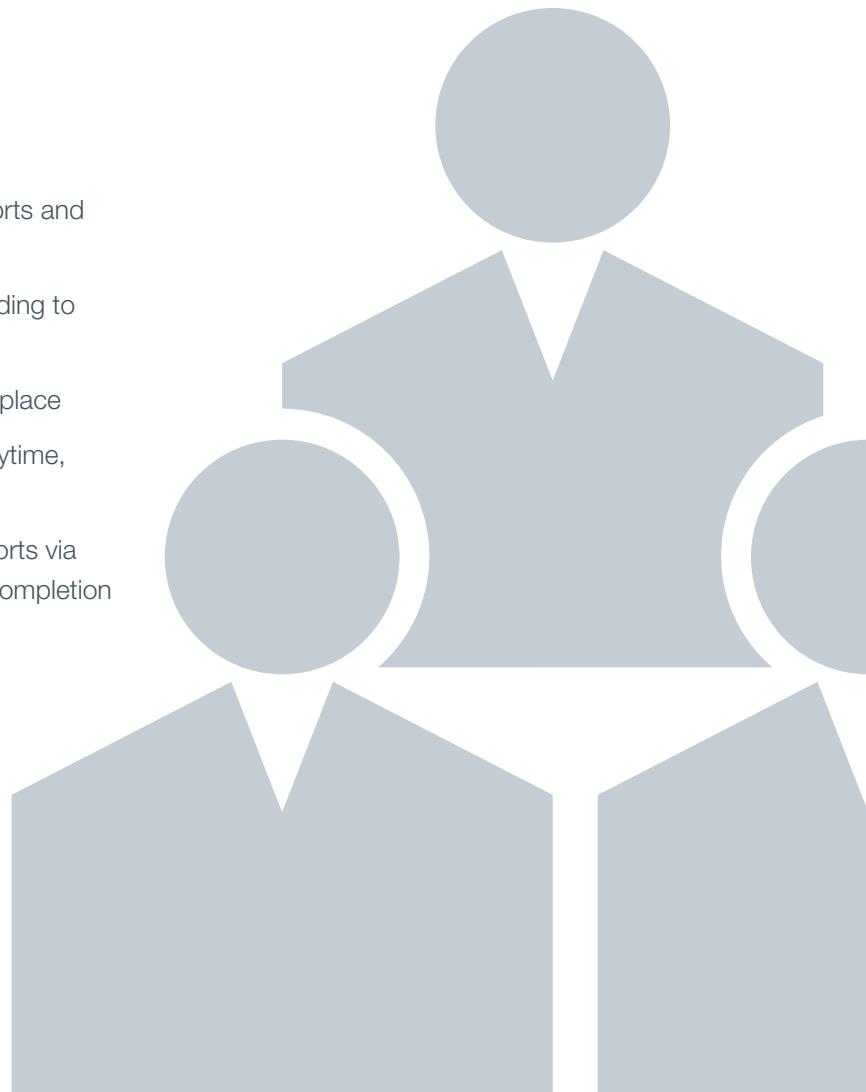
Create accurate quotes in minutes

- Simplify repeat orders with accurate historical customer work order information
- Maximize profit margins with real-time visibility of material, production, and shipping costs
- Eliminate the silos of manufacturing operations with one version of real-time information
- Create detailed and profitable estimates by combining expertise with accurate production information

SALES MANAGER

Increase customer satisfaction

- Allow technology to create pipeline reports and accurate sales forecasts
- Outpace competition by quickly responding to RFQs with real-time pricing information
- Manage all prospect information in one place
- Connect with customers on the go - anytime, anywhere, on any device
- Gain visibility into production status reports via dashboards for timely customer order completion



SELLING CLOUD MANUFACTURING ERP INTERNALLY

Combine flexible Cloud manufacturing ERP with powerful Sage Live Cloud based accounting software

Millions of manufacturers use different solutions everyday to share financial and customer information with each other, but as businesses grow - having islands of disconnected data limit potential growth.

What would you say if we told you connecting the shop floor and the front office in the Cloud will give you peace of mind and enable everyone in your business to accomplish more and faster?

Sage Live is a real-time accounting solution built to connect your front and back office for greater efficiency, insight, and collaboration. Sage has created a next generation Cloud accounting solution that empowers small and medium sized businesses to achieve organizational goals.

Why should you choose Sage Live to manage your company financials?

- Eliminate low-value tasks that are time consuming and repetitive
- Replace a mix of disconnected resources like spreadsheets and single function software with an integrated solutions that provides a seamless user experience
- Make decisions at the right moment with real-time views from any device
- Combination of best in class accounting software with Cloud manufacturing ERP technology to run your business with ease



INVESTMENT AND COSTS

Because Cloud software requires none of the on-premises hardware installations, server acquisitions, or painful upgrade cycles associated with traditional ERP, small and medium-sized manufacturers find they can get up and running without the expense, pain and opportunity costs associated with traditional enterprise technology purchases.

The fact is, Cloud ERP is subscription-based and exists on the operating expense line in your discretionary budget.

Cloud ERP is an investment and should be treated as such. Here is a comparison using hypothetical data to help you understand the investment differences of the ERP choices you have:

POTENTIAL COST	ON-PREMISES	CLOUD
Initial Licensing	\$200,000	\$50,000
Initial Hardware	\$30,000	\$0
Initial Implementation	\$100,000	\$25,000
On-going Maintenance	\$40,000/Year	\$3,000/Year
Internal IT Support	\$50,000	\$0
Product Upgrade/Training	\$3,000/Year	\$0
TOTAL 3 YEAR	\$509,000	\$84,000

For illustration purposes only



Basics of what you'll pay for:
subscription, upfront fees,
customizations, implementation
fee, training, etc.

PURCHASE PROCESS

So you've decided to buy a manufacturing ERP solution. Now you need to select the right solution. With so many available options, it could be overwhelming to even think about where to begin.

Here are 8 steps that will help you make the best decision:

- 1. Gather a selection committee –** Select a group of individuals from a variety of different departments in your facility. Choosing a diverse group of employees will ensure that the solution chosen will work for not only the executive of the company but the production and sales managers and so on.
- 2. Decide what functionality is most important –** Discuss where an ERP in your company could benefit the most. Is it in customer relationship management? Is it in production? Is it in accounting? Maybe selecting just a solution is the better choice if your company is hyper focused on that particular area. The best thing about an ERP is that it brings all of the needs of a manufacturer together in one end-to-end solution. Some ERP vendors only focus on specific modules and have add-ons, so make sure the ERP you select is comprehensive.
- 3. Do your research –** Like any company decision, it's important to make the right decision for you, so do your research. Talk to many different vendors and evaluate exactly what they offer and how it might benefit you and your team. Take the time to ask the right questions and receive a personalized demonstration. Give yourself the appropriate amount of time to feel confident about the important decision you make about your company's operations.

- 4. Is it made for your industry specifically? –** Select a solution that is made for your industry. The risk of selecting an ERP solution that isn't fit for your manufacturing industry can be limiting when it comes to the functionality that is required to make the solution a profitable.
- 5. Is it customizable, configurable or both? –** Know the difference between customizable and configurable. All software should allow you to add a report column or rearrange a dashboard. The solution you need allows you to change or add an entire business process. Ask your provider to demonstrate just how dynamic the system is... and make sure you can do it yourself!



PURCHASE PROCESS

Here are 8 steps that will help you make the best decision: (continued)

6. Is it a good fit? – Find a solution that will fit your business. That means that if your business is growing, scalability of the solution will be imperative to the longevity of the use of the system. Check on the costs of scaling, does it cost you more money? Not only is scalability part of being a good fit but accessibility could also be part of it. How would your manufacturing team want to access the software? Are your employees ever out on customer calls or job sites and need to access your operations information? If that's important, then mobility and easy accessibility are key to a successful ERP selection.

7. Support availability – Find out what support systems are in place for each ERP solution you research. How much will they cost? What support is available to you?

8. What does implementation/training look like? – Find out what implementation and training looks like for the ERP solution. As noted before, the attention to training and implementation are important to making your ERP selection a success.



To say the steps following your decision to upgrade your ERP are simple would be false. However, it does not need to be a process you fear.

Work with an ERP provider who will commit to being your partner.



THE COST OF DELAYING

Let's face it, in spite of all the benefits you know are within your reach, you also know there's never a good time to make a change in your organization that has this much impact.

So what is the cost of waiting? Here are some considerations.

- You are paying money today for technology that will not support you in your growth plans. At some point this will catch up with you.
- You need great talent in your organization, but it will be difficult to recruit innovative people. The "next gen" wants to work with new, cool and efficient technologies and you will get the "B" players if you don't look outside the nine dots and move into new innovative approaches to business applications.
- When it does come to a point where your current systems are no longer supported, you will be forced into a new technology decision. This will likely not be on your timeframe or within your budget, but on what is only available at the time. Being in front of the curve gives you the "leading" advantage.
- And by the way, the products in the Cloud are evolving. With the right vendor, your suggestions are more than likely to get onto the product roadmap versus becoming some sort of expensive customization.



GETTING SUCCESSFUL WITH MANUFACTURING ERP

GO BEYOND SOFTWARE

The team you partner with in your new ERP venture, must indeed be your partner. You will want to ensure you form a relationship with the people in your vendor's organization that will walk with you and your team, step-by-step, not only through the implementation process, but through the life of your ERP. **This is absolutely critical.**

Achieving success with manufacturing ERP software extends beyond the software itself.

IMPLEMENTATION

The speed of this step varies significantly when selecting on-premises vs. Cloud ERP software. With Cloud ERP, you eliminate the time consuming implementation and extra equipment installations of traditional on-premises ERP. Your company should designate an implementation team to work directly with the ERP vendor to complete a business process evaluation. From that evaluation, the ERP vendor will identify the particular implementation steps that make sense for your unique operations.

This gives you a timeline to know exactly what to expect for the duration of the implementation to prepare your team accordingly. One of the implementation steps will include those customizations and configurations that will tailor the ERP to work the way you do – but beware, some ERP vendors may charge you extra for those customizations! Your ERP vendor should communicate and work with you to accomplish your goals in the timeline and budget that you desire.



GO BEYOND SOFTWARE

TRAINING

Remember, it isn't really ERP that people resist; it is change. Learning a new way of doing something requires time, attention and commitment from your entire manufacturing team. Recognize the importance of the initial training of the ERP software because ERP software is only efficient when used correctly.

Make sure the ERP vendor offers significant live interactive and on-demand training opportunities for your team to gain the knowledge they need to execute the software to its fullest functionality.

Don't take this training period lightly –it's important to the success of your ERP!

SUPPORT

After implementation and training, it's your turn to manage your production operations in a live environment. Whether you want to admit it or not, there are definitely going to be some hiccups along the way while using your brand new ERP, and your ERP vendor shouldn't expect you to be proficient at it right away! That's why it's important to lean on your ERP vendor for support.

ERP vendor support is designed to help troubleshoot any issues that you might be having with your ERP. In fact, with Cloud ERP, your vendor is able to virtually login and see exactly what might be causing the issue you are having. This means you see a quick response and fix, leaving you with little to no downtime from your ERP.

ON-GOING SUCCESS

The success and effectiveness of your ERP solution doesn't stop after a completed implementation. It's important to understand that creating a partnership with your ERP provider is a must to ensure a lasting successful ERP.

With frequent updates and evolving functionality - you're bound to have a few questions. Make sure the ERP provider has 24/7 up-to-date online training for your convenience. Also, your ERP provider should respond quickly to software hiccups, and provide individual success support geared toward your individual needs.

Hey, you may even help the ERP provider develop their development roadmap from your individual functionality requests!

KEYEDIN MANUFACTURING'S CONFIGURABLE CLOUD ERP

KEYEDIN MANUFACTURING ERP IS:

In this guide we have offered you expert advice to help you through one of your most important business investment decisions. Let's see what makes KeyedIn Manufacturing Cloud ERP different:

COMPREHENSIVE

KeyedIn Manufacturing Cloud ERP helps you regain production control through the power of the Cloud and the features only available with this configurable manufacturing software, developed exclusively for the production manufacturer. With all the features you need in a comprehensive Manufacturing ERP software solution, KeyedIn Manufacturing empowers your operation by enabling the visibility you need to run efficiently and profitably.



POWERFUL

The industry's most powerful production planning engine is your key to production control.

Manufacturing resource planning using a powerful Production Planning Board enables integrated, automated operational planning for manufacturers. This Production Planning Board centralizes inventory and production management data into a single view to provide you with the visibility you need to control your production process. KeyedIn Manufacturing uses the most powerful available Cloud technology to give you a powerful production engine.

Your Production Planning now runs instantly with the touch-of-a-button, giving you immediate visibility of your production capacity. This real-time data helps you coordinate component materials with machine and labor availability. You gain the ability to optimize both supply and demand with color-coded indicators of problem areas and dynamic control of scheduling.

CLOUD ERP

Built in the Cloud, for the Cloud.

KeyedIn Manufacturing is a native Cloud manufacturing ERP solution, delivering to you the most up-to-date software through a simple Internet connection. This means your software is always improving, adding features, and delivering to you a seamless experience that keeps your facility running at the pace you need to be profitable and competitive.

Exclusively with KeyedIn Manufacturing, the majority of the responsibility of software delivery away from you. In other words, KeyedIn Manufacturing manages the software environment, updates, development, data center relationship, and back-up/disaster recovery services, to name a few. Imagine now that your IT team can focus on far more important business priorities.

KEYEDIN MANUFACTURING ERP IS:



Not all Cloud software is created equally.

Be wary of how your software is written and delivered. Refer to page 22 of this guide for a detailed explanation of Native Cloud, hosted, and on-premises delivery.

KeyedIn Manufacturing is native Cloud.

EXTENSIBLE

Connecting your critical business applications is the key to visibility and efficiency.

The point of technology and software is to manage and compute all of your complex data so that you can use it to make strategic business decisions – decisions that grow your business and your revenue. But when one critical business application fails to share data with another critical business application, you find yourself in the inefficient mode of data re-entry, or worse, you never gain the full picture of the data that exists in your operation.

KeyedIn Manufacturing Cloud ERP software has open APIs to make your ERP extensible to your other critical business applications. This means your critical software solutions share data to connect all your key business functions automatically. Connecting is the key to assuring your business processes are running efficiently and with a single source of the truth when it comes to your critical data, without re-keying, re-entry, or worse... paper!

MOBILE

You can access your ERP anytime, anywhere, and on any device

Whether on the shop floor, in the office or on the road, KeyedIn Manufacturing can be accessed via the web. Access KeyedIn Manufacturing ERP from any device -mobile, tablet, desktop, for real-time manufacturing operational information.



KEYEDIN MANUFACTURING ERP IS:

SECURE

Data security like your online banking uses.

KeyedIn understands that data security is one of your most important concerns when it comes to subscribing to applications online. That is why KeyedIn Manufacturing partners with a world-class data security provider, Dimension Data, a \$6.7B company who serves 72% of the Fortune 100 and 60% of the Fortune 500 companies around the globe and whose core competency is protecting data. These experts stake their reputation on data security because they know nothing is more important to you.

YOUR PARTNER

KeyedIn Excellence Academy gives manufacturers 24/7 access to up-to-date online training courses on specific functionality that are easily accessible, and offers live training before, during and after implementation. With no paper mess, KeyedIn training programs give your team the ability to become certified on specific functionality - proving your team is comfortable with the software. Managers have access to training reports - giving them visibility into their teams readiness to use KeyedIn ERP software to its fullest extent.

We understand that working with software can be a challenge, so we are here to help.

KeyedIn's Support Team is committed to customer satisfaction and quick to help when customers have questions. With documentation and video resources, they respond to questions or concerns with valuable assets to put customers back on the right track.

Since KeyedIn Manufacturing ERP is deployed via the Cloud, KeyedIn's Support Team has true visibility of the software to identify problems quickly and send them to the Development Team to make adjustments. KeyedIn understands that your success reflects heavily on our own success. The partnership that KeyedIn creates with you makes the relationship very personalized giving you reassurance that all software support given will be customer-centric and geared toward your specific manufacturing needs.

THE DEFINITIVE GUIDE TO MANUFACTURING ERP

We hope you have found “The Definitive Guide to Manufacturing ERP” helpful. Although we have attempted to answer all your questions, we recognize that you might still have some. The best way to answer these is to schedule a one-on-one discussion with one of our manufacturing experts.

In this next step in the process, together we will complete a detailed discovery to ensure you get the solution you need to realize all the benefits we have indicated here.

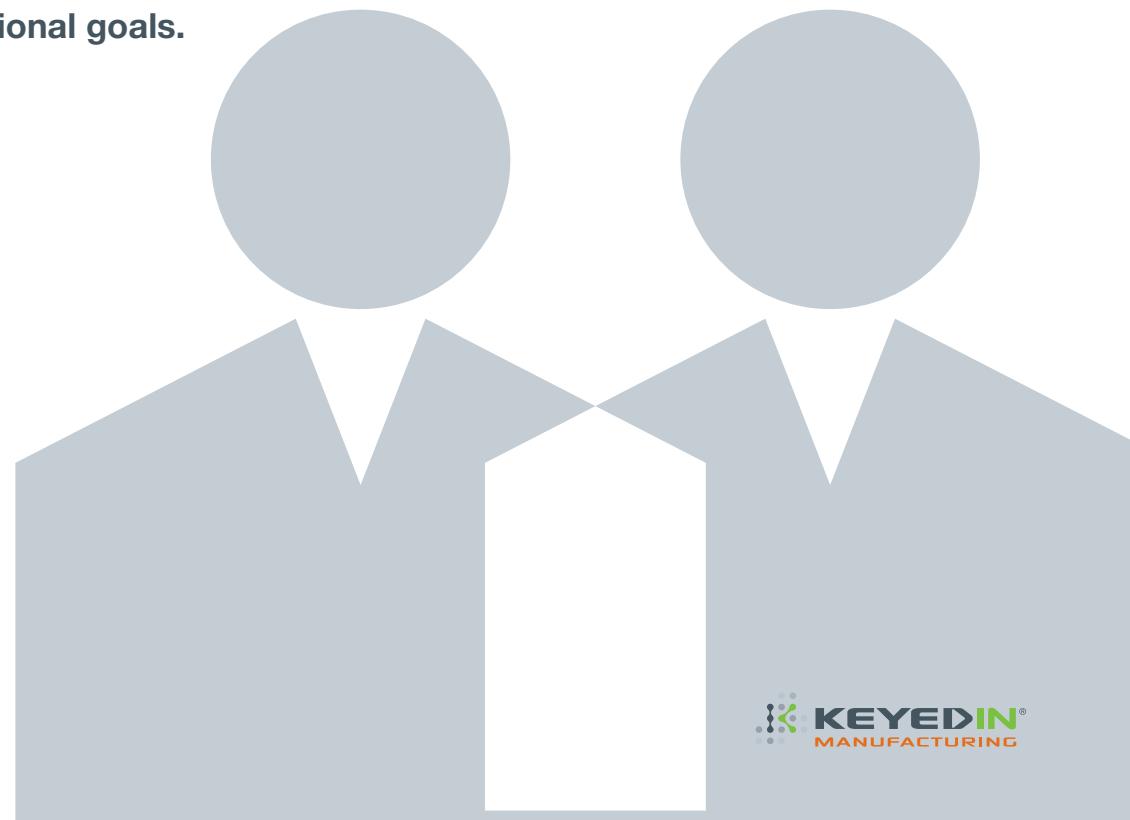
Reach out to our manufacturing ERP team dedicated to helping you accomplish and attain your manufacturing organizational goals.

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ABOUT KEYEDIN® SOLUTIONS

KeyedIn Solutions helps organizations simplify business processes, improve performance and drive results through an innovative combination of aPaaS and SaaS business solutions. These applications were developed in the Cloud for the Cloud, to capitalize on the exclusive benefits only the Cloud can offer.

The company's SaaS-based business systems include KeyedIn Manufacturing, a configurable Cloud ERP software that drives operational excellence for manufacturers, and is designed exclusively for production manufacturing. KeyedIn Projects is a strategy-led and execution-driven project management solution that aligns organizations with complete visibility for effective Project Portfolio Management (PPM) as well as drives utilization, profitability and performance to achieve growth with Professional Services Automation (PSA). KeyedIn Konfigure™ aPaaS is transforming custom enterprise-level application development, building new business systems and system components with greater speed, agility, and innovation.

When businesses need results fast, they look to the Cloud – and turn to KeyedIn Solutions.

You should too. Keep up with us at keyedin.com/mfg, Twitter [@KeyedInMFG](https://twitter.com/KeyedInMFG), or LinkedIn [KeyedIn Solutions, Inc.](https://www.linkedin.com/company/keyedin-solutions-inc)



Configurable Cloud ERP to
Drive Operational Excellence

Part of the KeyedIn Solutions Business Portfolio



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