

Kickstart production and manufacturing in 2022 with ERP

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The manufacturing industry is aggressively tackling the task of rebuilding what the last two years have disrupted. In spite of labour shortages and supply chain instability, the US is seeing industrial production and capacity utilisation overtaking pre-pandemic levels, and there is an upward trend in new orders for all major sectors. This is according to Deloitte's recent analysis of the [manufacturing industry's outlook for 2022](#).



For this reason, now more than ever, it is of critical importance for businesses to have an integrated, smart business solution to meet today's tech-driven, innovative, competitive landscape. [Enterprise resource planning solutions](#) (ERP) optimise efficiency, reduce waste and costs, increase sales and productivity, and most of all allow leaders to make accurate, informed and strategic decisions.

ERP is reshaping the operation systems ecosystem as we know it. After a rollercoaster ride of highs and lows due to the pandemic's disruptions, manufacturers now embrace digitisation of front and back office tasks through technology like never before.

The current landscape for manufacturers in 2022

1. The supply chain crisis

The ripple effect of a broken link in any supply chain is significant. Now consider the current situation and consequences of several broken links: shipping and port congestion, truck and transport backlogs, labour shortages, all of which compound to mean higher demand, price hikes, slow deliveries, profit losses. [Smart manufacturers](#) are making use of digital supply networks and data analysis to respond in a more flexible, multi-tiered way to further disruptions.

2. Green, lean manufacturing

[Environmental, social, and governance \(ESG\)](#) factors are fast becoming a priority when it comes to achieving manufacturers' sustainability goals. Cost of capital can be linked to ESG ratings, making it a key component of manufacturing's financial wellbeing and competitiveness. There is an expectation that manufacturers should cite diversity, equity, and inclusion numbers, and leaders are on the hunt for talent in the workforce that will meet ESG standards.

Additionally, net-zero or carbon-neutral goals are resulting in the redesign of sustainability initiatives. Many manufacturers are proactively complying in order to evoke positive change, and create competitive advantage.

3. More automation

From corporate functions to the factory floor, manufacturers are adopting automation to capture growth and safeguard future profitability. While advances in robotics have been steadily adding value, automation now includes staff-heavy, slow, manual tasks such as stock management, invoicing, accounting, scheduling, and production planning.

Automation was initially viewed with disdain as a threat to livelihoods, however shops that deploy automation find that it frees up their existing staff to focus on more profitable tasks. The [rising skills gap in manufacturing](#), plus the increased availability of [IoT technology](#), means this trend is only going to accelerate in 2022 and beyond.

While this is not a new trend for forward-thinking manufacturers, those who have yet to do so should seriously consider embracing automation in 2022.



Why manufacturers need ERP in 2022

In spite of pandemic-induced challenges, the manufacturing industry has been in growth mode according to the [Institute for Supply Management](#). To sustain this growth, effective organisation and management of daily business activities is needed.

Manufacturers are well acquainted with manufacturing resources planning (MRP) and ERP systems take it to the next level. An ERP system has all the elements of an MRP and also integrates them with other departments' functions, such as:

- Materials and inventory
- Purchasing
- Production and scheduling
- Sales and customer relationship management (CRM)
- Operations
- Accounting and finance
- Human resources
- Fixed asset monitoring
- IT

Modern ERP is enriched with data insights, intelligent automation, and a user-friendly interface. With an entire operations system under one roof, with the latest, most accurate data available 24/7, ERP puts your entire company at your fingertips.

To gain and sustain a competitive advantage in 2022, an ERP solution is the foregone conclusion.

What to look out for when investing in manufacturing ERP

Not all ERP solutions are created equal. Some come as separate off-the-shelf modules that need to be purchased and added on, while others come as an [all-in-one, quick, easy business operation solution](#) that can be customised to perfectly meet your needs.

Here are non-negotiable functionalities for manufacturers seeking ERP solutions in 2022.

1. Manufacturing, engineering or production functionalities

This functionality streamlines operations when it comes to product planning, materials sourcing, production control, quality evaluation, process synchronisation, and product forecasting. The ERP solution should make provision for orders that are:

- make-to-stock
- make-to-order
- configure-to-order
- engineer-to-order
- just-in-time manufacturing
- materials control
- lean operations

[Manufacturing software](#) streamlines manufacturing processes through automated planning, production scheduling, and fulfillment. It also benefits manufacturing speed and accuracy, and increases transparency and efficient business processes.

2. Supply chain management (SCM)

Your ERP solution should be able to trace from source. This enables manufacturers to manage their product flows from production to customer, and vice-versa, for returns or recalls. It also helps in the prediction of future issues in production and inventory, ensuring agile and smooth operations.

3. Orders, inventory/material management, and purchasing

The automation and optimization of inventory movements, product movements, and warehouse data is essential for manufacturers. Additionally the ERP solution should offer purchasing functionality to manage materials procurement. This must include supplier listings, quotation requests and analysis, purchase orders and history, stock updates, and other processes. This means data-driven decisions are made when it comes to suppliers, pricing, and inventory management.

How to get immediate gains when deploying ERP for manufacturing businesses

The many [benefits of utilising ERP for manufacturers](#) are well documented and include the ability to streamline and scale operations faster, to operate leaner, and to align the back office with front office processes.

ERP solutions can significantly reduce manufacturing lead times. The advantages delivered by ERP implementation specifically for manufacturers include the following:

1. Quoting and estimating

Typically, when it comes to [quoting and estimating](#), manufacturers tend to use manual systems like spreadsheets or paper systems, or they turn to [customer relationship management \(CRM\) systems](#). While CRMs are an upgrade to risk-prone paper systems, they are often stand-alone systems that may not integrate well with business systems. This limitation results in a sales team making 'blind' quotations, without clarity into current backlogs or shortages, or significant duplication of effort since employees must log in to each system and enter data separately.

The ideal solution is to deploy a [business operating system \(BOS\) that has CRM functionality](#) built in. This gives the sales team real-time information, and allows decision-makers to predict changes in future demands and plan accordingly. This predictive analytics means production can support delivery dates more effectively.

2. Engineering and product configuration

Engineering accounts for a significant part of manufacturing. Ensure your ERP or BOS system allows for product configuration and computer-aided design (CAD) integration.

Manufacturers that operate in a configure-to-order environment need to choose a BOS system that supports this, which allows sales teams to perform a significant amount of “engineering” by selecting the elements of the product in the quote for the production team to manufacture.

This process results in a bill of manufacturing materials and specifications, which the sales team can enter into the ERP system. This way the BOS system greatly reduces lead time while still correcting mistakes during the design phase.

3. Reduced production lead times

The ability to carry out tasks as early in the manufacturing process as possible will result in reduced lead times. This reduces the risk of rework to correct design faults and ensures manufacturers meet their delivery dates.

The correct BOS solution streamlines quoting and engineering, and so shortens the manufacturing lead time itself. The main determining elements in this process involve material and resource availability.

Material availability

While BOS systems are similar to MRPs, they require accurate inventory counts, lead times from suppliers, and planning policies for parts. Ensure your BOS solutions provider knows how to set this up when [implementing your ERP solution](#).

Resource availability

When calculating resource requirements for [production planning](#) - such as run rates and shift availability - your BOS system takes equipment and staffing availability into account.

How to choose the right manufacturing ERP system

When choosing an ERP for your manufacturing company, bear in mind that this is an investment that must add value and meet your needs for the next five to 10 years. There is always an initial disruption that takes place while the business learns the new system and new way of operating, but this passes. To reap the real long-term gains of your ERP, it is fundamentally important that you have support and ongoing customisation available after implementation to meet your business's changing demands.

The primary things to look out for are:

- Production and business functionality
- Ongoing training and support
- Ad-hoc customization as needed
- Flexibility
- Maturity
- Reputation
- Cost
- Ease of use

Some ERP solutions to review

- [IQMS](#). This is a modular ERP solution that has the basic ERP functionalities, but needs additional modules to be purchased for further functionality. This system is available through the cloud or on-premise. The estimated prices have reached \$45,000 for annual cost and \$3,000 per user per month.
- [Microsoft Dynamics NAV](#) can be used within manufacturing and is designed primarily for SMBs and includes out-of-the-box operations, financial accounting, project management, and purchasing functionality. Available on-premise or in the cloud. Pricing after infrastructure and implementation costs, is \$210 per user per month for full features with the Dynamics 365 plan.
- [QuickEasy BOS](#) is a true all-in-one system that requires no additional purchases of modules. It is highly customisable and caters exceptionally well to the engineering and manufacturing industries. The complete, unified set of ERP functionalities and modules include plant floor to top floor functionality. It helps companies of all sizes manage their manufacturing operations with agility and superior performance. Available on-premise or in the cloud. After implementation costs, payment is on a “pay as you go” subscription service, with pricing at \$49 per month per user.

Conclusion

BOS or ERP systems solve a number of issues that manufacturers will face in 2022. They offer a direct and easy path to digital transformation of back and front office tasks. Their integrated functionality automates and streamlines operations processes, improves customer service, increases sales, facilitates supply and demand, controls and reduces costs, and manages growth.

While larger manufacturing concerns have made use of ERP systems for decades, small to mid-sized manufacturers can gain big-player benefits from deploying quick and flexible modern ERP solutions. This is because ERP gives them a larger view of their entire manufacturing process, reduces lead times by streamlining the quoting and engineering process, and allows manufacturers to base their production schedule on data instead of gut-checks.

In spite of all these benefits, implementing an ERP solution is a complex task that shouldn't be considered lightly. It is vitally important to partner with an experienced provider with experience in manufacturing and ERP deployment who can support your business goals through a customised, integrated ERP system.

ABOUT THE AUTHOR

Anton is the commercial director of QuickEasy BOS, a global ERP company that develops and supports business operating systems for organisations in every industry. His passion is to see manufacturing concerns streamline operations, reduce waste, and improve efficiencies through providing astonishingly flexible BOS solutions, with ongoing professional support and customisation.

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