



EXECUTIVE BRIEF

The top 5 issues in IM&E today

Manufacturing

How Infor helps level-up manufacturing performance

While industrial machinery and equipment (IM&E) manufacturers face numerous market challenges, they are also uniquely positioned to seize emerging opportunities ahead of other industry verticals. Many have a strong foundation of technology already in place and are now seeking ways to level-up their performance by turning to the cloud and advanced modern solutions, applying advanced functionality like artificial intelligence, augmented analytics, and the internet of things (IoT). With such tools in place, IM&E manufacturers can better solve pressing issues.

Greater customer demand for configure-to-order (CTO) and engineer-to-order (ETO) products add complexities to manufacturing operations. The need for better supply chain visibility, the push for greater differentiation through project management and collaborative design, plus an increasing emphasis on service opportunities are also among the top issues confronting IM&E manufacturers today. Let's explore each, and how technology can help address them.

1. Shifting buyer behavior

The IM&E manufacturing industry must adapt to shifts in buyer behavior. Customers are no longer purchasing expensive, stock products or are willing to wait for delivery. Many customers expect CTO or ETO products that better meet their unique needs. Increased customization has impacted the way manufacturers plan for demand, manage resources, and utilize technology.

In response to these challenges, manufacturers need to change the way they design, build, and deliver products, as well as alter their R&D, supply chain, and sales processes. This starts with the ability to create timely and accurate custom quotes, while ensuring profitability throughout the quote-to-order process. By relying on a configure, price, quote (CPQ) system that's directly integrated with a manufacturer's other business systems—such as sales, engineering, planning, finance, and manufacturing—the manufacturer will not only be empowered to provide unique outcomes customers desire, but will also gain process efficiencies and improved operations.

A CPQ solution helps guide customers through predefined selection choices, recommending appropriate product features, and quickly providing a quote and visual rendering of the finished item. This creates a powerful buyer experience, encouraging the customer to make the purchase expediently. The specifications for the order go directly into the system, improving visibility into order details, helping to drive faster material planning, and reducing the number of orders that require engineering-based callbacks. As a result, manufacturers can see increased sales revenue and reduce operational costs by controlling waste and eliminating BOM errors.

2. Increased operational complexity

Focusing on a larger proportion of CTO and ETO products, managing more complex supply chains, collecting and analyzing massive amounts of data, and supporting new business models significantly all increase the complexity of manufacturers' end-to-end operations. The need to track of a greater number of product configurations is just the beginning. To support such complex operations, manufacturers must improve the reliability and interconnections between key departments and processes.

Historically, IM&E manufacturers have had difficulty matching inventory and demand, while struggling with delivering orders to customers efficiently and on time. These issues are rooted in a lack of internal visibility and a reliance on manual data entry and processes. Bringing R&D, sales, manufacturing, supply chain, billing, service, and more into the equation adds an additional complexity that outdated processes and systems simply can't handle.

Today's IM&E manufacturers need to transform their operations by connecting machines, processes, and people. This requires an end-to-end solution that's designed specifically for the IM&E industry. The ideal solution can manage the entire process across the business, from planning and scheduling to supply chain and warehouse management. This provides the visibility to keep everyone and everything connected. With complete, enterprise-wide, global visibility, manufacturers can streamline ordering, facilitate material planning, meet market demand, optimize operations, access data insights with improved analytics, and much more.

3. Supply chain crunch

One of the most complex aspects of IM&E manufacturing is managing the supply chain. Increasing ETO manufacturing complicates the sourcing of raw materials and emphasizes reliance on co-manufacturers and suppliers of subsystems and components. Without modern solutions in place, it is increasingly difficult to ensure the right materials are in the right place at the right time.

For the IM&E industry, there is also pressure to have the necessary maintenance, repair, and overhaul (MRO) inventory available to meet demand. This is difficult enough when they are trying to gain visibility and control of materials internally; it becomes a greater challenge when more of the supply chain data exists outside of a manufacturer's four walls.

For a manufacturer to make accurate projections, achieve favorable prices, and meet customer delivery demands, they must improve and maintain supply chain visibility, better manage raw materials, and communicate effectively and efficiently with suppliers. This level of visibility and communication can be achieved with orchestrated, optimized, and collaborative supply chain tools to create a fully integrated, real-time, supply chain ecosystem.

The rise of AI in supply chains may be key to delivering success. **IDC's FutureScape: Worldwide Supply Chain 2022 Predictions** suggests that "[by] 2023, 50% of all supply chain forecasts will be automated through the use of artificial intelligence, improving accuracy by 5 percentage points."

This will result in the ability to onboard new suppliers faster, share documentation and information more efficiently, and better synchronize the supply chain to reduce risk and improve flexibility and profitability. Relationships with suppliers will be improved, leading to better prices and an increased ability to service customers on-time, be it through smarter shipment routing or tracking and avoiding bottlenecks such as the infamous **blockage of the Suez Canal** by a container vessel.

4. The need to deliver collaborative projects

For project-based manufacturers, collaborating directly with customers is essential. And for many IM&E manufacturers, offering customers collaborative design capabilities is a major competitive differentiator.

To deliver profitable projects and collaborative designs that are on-time and on-budget, manufacturers need an efficient design process, streamlined workflows, and accessible data and documents. It is critical that a product lifecycle management (PLM) solution delivers:

- Standardized processes
- A consistent system of record
- The ability to alter projects on the fly
- Real-time access to design and project data

A robust PLM system gives manufacturers deep insight into project costs, helps perform complex resource planning, and allows manufacturers to provide accurate delivery updates to customers.

This level of collaboration essentially makes a manufacturer's customer their business partner, and it requires effective data sharing and communication. Without it, manufacturers can face frequent change orders, poor demand planning, and an increased likelihood of inaccurate job costing and estimating—which can lead to reduced profitability and customer attrition.

5. Service management and servitization

One way to help IM&E manufacturers build customer relationships is by providing after-market field service. In fact, service is becoming an increasingly important component of the bottom line for IM&E manufacturers. In an era when it's difficult to compete on price, differentiating on service offerings enables manufacturers to gain a competitive advantage and improve customer loyalty and retention. However, this can represent a major business model transformation—one that requires new insight into machinery data and different organizational and employee competencies. Poor service of customer assets leads to increased costs, inadequate employee utilization, and fewer maintenance contract renewals. To successfully deliver reliable field service, manufacturers must be able to fully support dispatch, maintenance, and repair in their back-office systems.

A solution designed for aftermarket services should include functionality for dispatching technicians, tracking as-serviced history, and managing inventory of replacement parts. Additionally, mobile field service functionality can vastly improve the effectiveness of field service technicians and help increase first-time resolutions by ensuring technicians are at the right place at the right time with the right materials and service history.

Servitization holds another aftermarket opportunity. It creates a “pay for what you use” business model which aligns with a customer's objectives and available budget. Rather than selling a product to the customer, the manufacturer sells an outcome, such as [X] miles traveled, [X] tons of soil excavated, or [X] gallons of water filtered. The manufacturer provides the equipment and uses embedded sensors and IoT technology to track the performance of the machinery or equipment. This is how the manufacturer knows when and how to bill for the service.

The manufacturer also monitors equipment for any service required and measures the outcomes. By keeping the machinery running at peak efficiency, the manufacturer can accurately predict costs and make a profit on selling “as consumed” services. This model creates many advantages for the customer, especially ones with shifting objectives, short-term needs, and limited capital. Offering this option, may help potential customers reengage projects that were stalled due to volatility in the global market or loss of funding.

Making the most of modern technology

These trends and issues represent significant challenges in the IM&E industry that must be addressed before manufacturers can tap into emerging opportunities. Many manufacturers currently lack the business systems, automations, workflows, and processes to support these modern ways of doing business. Business systems that were implemented years (and often decades) ago can no longer support today's complex demands.

Whether it's CTO or ETO, IoT, extended supply chains, or servitization, these demands all rely on utilizing modern technology. It's this digital transformation that promotes increased efficiency and effectiveness of existing processes. It also opens the door to differentiation, allowing manufacturers to rethink approaches and create new data-driven ways to deliver and elevate products, services, and the overall customer experience they offer.

From cloud computing and collaborative technologies to mobility and analytics, technology helps solve specific needs and creates actionable business insights, building a foundation for future growth for IM&E manufacturers.



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