ERP for the Machinery and Equipment Industry

A white paper for U.S. manufacturers and distributors focusing on business drivers and technology requirements.

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Introduction

Machinery manufacturing is one of the largest and most competitive sectors of the U.S. economy employing more than one million Americans. This market includes more than 20,000 companies with combined annual revenue of about $380 billion[1]. While the vast majority of these are small and medium-sized enterprises, globally-known brands include General Electric, Caterpillar, Applied Materials, Deere and others.

In addition to selling domestically, leading markets for U.S. machinery and equipment exports include Canada, Mexico, China, South Korea and Japan. Exports of capital equipment alone totaled $166 billion in 2015[2]. Conversely, the largest global competitors to U.S. machinery and equipment manufacturers are based in Germany, Japan, Italy and China.

This market produces generators, pumps, valves, oil & gas equipment, elevators, conveyors, forklifts and a wide range of complex end products. Companies here are under extreme pressure to update their technology and accompanying business practices/processes to stay competitive.

Key Industry Drivers

The machinery and equipment industry is experiencing profound transformation as companies move from transaction-centric operations to data intelligence-centric companies that can change operations "on the fly." Since ongoing fluctuations are tied to the end user industry sectors – of which many, like oil & gas, construction, etc., are highly volatile – having real-time access to information drives either success or failure for machinery manufacturers and their related sub-sector, equipment manufacturers.

While engineering expertise remains at the heart of this sector, shrinking margins are pushing U.S. manufacturers to further access foreign markets, accelerate their product lifecycles, improve their customer collaboration and more quickly move innovative products/ideas/marketing concepts into reality. Global competitive pressures challenge the ability to accurately forecast supplies, production requirements, sales and regulatory requirements.

Areas for Operational Improvements

This industry's compartmentalized functional department silos are being re-geared to move holistically into elastic process-centric organizations. The primary targets for improvements here are:

Customer focus is replacing pure efficiency focus

Redirection of corporate priorities to focus on customer satisfaction and retention is the new top objective of many manufacturing sector CEOs. Many manufacturers today are already moving away from an extreme focus on efficiency to pay closer attention to buyers.

"Smart Factory" advanced planning and tracking

The speed-to-market mandate can be effectively fed through rules-based product configuration systems, automation and role-based analytics displayed via dashboards. There needs to be no compromise on accuracy, defects, safety or compliance mandates.

100% Accurate parts and products traceability

Today's more litigious approach to resolving complaint issues with legal actions as the first recourse, puts far more pressure on machinery and equipment manufacturers to have fast and highly accurate traceability and tracking capabilities. Source systems are needed to inventory the location and usage of all parts and end products.

More sophisticated financial controls

Many companies state this as their number one objective, but few say they are completely satisfied with their ability to have a 360 degree view of their financial picture in real time. That is changing with the influx of newer, better-integrated systems that unite the full spectrum of sales, expenses, capital outlays, debt management, currency conversions, etc.

The Machinery and Equipment Industry ERP Checklist

As mentioned previously, if engineering expertise is the heart of machinery and equipment manufacturing, then enterprise resource planning (ERP) technology solutions are the brains. The maturity of competitive ERP systems provides a wide spectrum of integrated capabilities that functionally sound similar, but in practice can be remarkably different.

However, it's some of the following capabilities that are the most important to drill down into the ERP vendor's fine points:

✔ Product Lifecycle Management

CAD system integration, customer collaboration, product configuration, plus automation of bill of materials and engineering change controls.

✔ Supply Chain Optimization + Materials Management

Better inventory forecasting and materials planning, auditable lot and parts traceability, supplier-driven EDI capabilities, enhancements to returns and defect processes.

Next-Generation Production

Capacity planning that infuses advanced scheduling tools plus calculated scrap/waste control metrics, mobile-enabled warehouse management, plus compliance and OSHA safety controls.

It's All About the Customer

Fully-integrated CRM that provides clear visibility to each customer, contract, order and issues, improved quoting accuracy, key/repeat customer pricing capabilities.

✔ Strategic Financial Planning

State-of-the-art ERP financials are no longer just about closing the books and covering the tax/accounting basics. Today's best ERP systems should include role-based visibility at every checkpoint into key trends, repeat buyer activity, market fluctuations etc. Streamlined purchase orders, general ledger systems and cash/asset management capabilities should be a given.

Today's machinery and equipment manufacturer also requires enhanced performance management tools, process management across all operations, ubiquitous mobile access and a customizable user interface to personalize their activities.

You might also be interested in

our new Brochure **"Forge Ahead with SYSPRO for Industrial Machinery and Equipment"**. Click here to download and learn more about SYSPRO's ERP solutions for the Machinery and Equipment industry.

References

[1] Dun & Bradstreet First Research, Machinery Manufacturing Industry Profile, 2/13/17

[2] U.S. International Trade Association, Select USA website 2017

About SYSPRO

Established in 1978, SYSPRO is an industry-built Enterprise Resource Planning (ERP) software solution designed to simplify business complexity for manufacturers and distributors. SYSPRO provides an end-to-end, fully integrated business solution, delivering actionable insight that supports effective decision-making, strong cost control, streamlined processes, and improved productivity.

What sets SYSPRO apart is an unwavering, long-term focus on the manufacturing and distribution sectors, a practical approach to technology, and a passionate commitment to simplifying business to increase success for partners and customers.

SYSPRO is highly scalable and can be deployed in the cloud, on-premise, or accessed via any mobile device.

For more information, visit **www.syspro.com**.

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