RESEARCH NOTE
THE VALUE OF MICROSOFT DYNAMICS AX FOR MANUFACTURERS

THE BOTTOM LINE

Microsoft Dynamics AX helps manufacturers increase visibility and improve business operations, driving higher margins, greater productivity, and reduced costs.

Microsoft Dynamics AX is a business management application for mid-sized and larger organizations that is designed to improve operational efficiencies through automation and increased end user productivity. Beyond traditional ERP components such as financials, business intelligence and reporting, sales and marketing, and service management, Microsoft Dynamics AX also includes key functionality to support manufacturing including:

- Manufacturing management tools including production order management, bill of materials (BOM) management, production tracking and reporting, forecast scheduling, master planning, cost tracking, job monitoring, and shop floor management.
- Supply chain management functionality including order management, trade agreement support, RFID support, logistics and inventory management, multi-site and multi-currency support, master planning, quality management, warehouse management, and demand planning.
- New investments include support for lean manufacturing, process manufacturing, and sustainability monitoring.

Microsoft Dynamics AX can be customized using standard integrated development tools to meet the specific needs of manufacturers. Microsoft's Application Integration Framework allows access to Microsoft Dynamics AX functionality as Web services so it can be easily integrated with both Microsoft and non-Microsoft applications.

Nucleus analysts have analyzed hundreds of Microsoft Dynamics AX deployments over the years and found that organizations broadly achieve returns in areas of increased visibility, increased productivity, and reduced costs. This research note focuses on the specific experiences of manufacturers deploying Microsoft Dynamics AX to support their operations and analyzes the types and scale of returns manufacturers can expect to achieve from deploying Microsoft Dynamics AX.

THE CHALLENGE

Now more than ever, manufacturers must have a high level of visibility into their businesses so they can identify cost savings, improve margins, reduce time to

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market, and drive innovation. Although not all employees in a manufacturing environment need access to all business data, they do need easy access to information that is relevant to their jobs. Microsoft Dynamics AX provides manufacturers with an intuitive application to manage the entire manufacturing process from planning to execution to sales to supply chain management. Role-based interfaces, close compatibility with other Microsoft tools and technologies, and flexibility to support manufacturers' specific work processes enables Microsoft's partners to deliver solutions that are relatively quick to deploy, easy to learn, and consistent in delivering value to key areas of the manufacturer's business.

KEY BENEFIT AREAS

Key benefits from Microsoft Dynamics AX that drove returns for manufacturers included improved visibility, increased productivity, improved customer relationship management, reduced inventory, improved supply chain collaboration, and reduced costs.

Improved visibility

Greater visibility into all aspects of operations was the number one benefit Microsoft Dynamics AX customers in manufacturing recognized, particularly those that were moving from disparate systems or individually-owned paper or Microsoft Excel files. The Microsoft Office-like interface, connections with other Microsoft tools, self-service business intelligence and reporting tools, dashboard KPIs, and business analytics within Microsoft Dynamics AX helps users work effectively in a familiar environment so they can make better decisions more quickly.

As one customer said, "*We have greater visibility in general – not just transaction visibility but a more holistic view of the company. This has led to a lot of insight into things that are more or less profitable, insight into what our actual product time is, and insight into the popularity of different products*."

Increased productivity

In the current economic environment, manufacturers must make the most of their most valuable resource - people. Microsoft's investment in Microsoft Dynamics AX has focused on making its already-intuitive interface even more easy to use with role-tailored user interfaces and Role Centers that help users organize information, prioritize tasks, and access needed information in a single view based on an employee role in the organization:

- One manufacturer was able to increase order volume by 53 percent while keeping shipping staff flat and only increasing customer service staffing numbers by 20 percent.
- Another customer was able to automate parts configuration to reduce the number of parts in its system from 37,000 to 8,000 while dramatically cutting the time needed to enter a transaction.

Users moving from disparate systems or paper-based processes can expect Microsoft Dynamics AX user productivity to increase by up to 30 percent.

Improved customer relationship management

Manufacturers centralizing all of their order and inventory information in one system and taking advantage of the unified communication, lead and opportunity management, sales management, and order management capabilities of Microsoft

Dynamics AX can improve efficiencies not just on the shop floor but in interactions with customers as well. Manufacturers directly attributed increase in orders and, in some cases, greater competitive positioning because of the ability of customer service or sales people to have real-time access to product availability information for customers. This increased the likelihood of making the sale that day, increased customer satisfaction, and reduced the need for sales administration and support. As one user said, "*When a customer calls service or tech support, we can see when they placed an order, when they called us, all the information within one screen — it's all integrated. A customer service person can know immediately if we have inventory or what the expected production date is and get that answer in real time to the customer. We can also tackle the CRM side in a much more holistic way and instead of doing mass e-mail campaigns to customers, advertise and promote products to customers in a much more targeted way.*"

Reduced inventory

Logistics and inventory management, bill of materials (BOM) handling, warehouse management, and demand planning capabilities within Microsoft Dynamics AX enable greater visibility into inventory at every step of the manufacturing chain, enabling manufacturers to reduce the amount of inventory they need to carry:

- "*We can much more accurately track with master planning for raw materials. In terms of overall inventory, we have a much better understanding of our per-batch cost which gains us five to 10 percent of margin.*"

- "*We have much greater visibility from a planning and acquisition standpoint on inventory. Inventory was reduced, just through the use of ERP, by about 15 percent.*"

One manufacturer moving to Microsoft Dynamics AX was able to reduce inventory levels by 50 percent as a result of greater visibility into the supply chain; typical savings for manufacturers adopting Microsoft Dynamics AX are closer to 10 to 15 percent.

Improved supply chain collaboration

The ability to synchronize demand data with supplier and production availability enable manufacturers to reduce time managing suppliers and instead focus on opportunities to gain greater supply chain efficiencies on an ongoing basis. As one customer said, "*With suppliers, we have a clear picture on a monthly basis and run cash flow on a weekly basis. We're much more aware of payables and receivable and have been able to maintain or improve our terms on receivables.*"

Reduced costs

Beyond staffing and inventory cost savings, manufacturers deploying Microsoft Dynamics AX are often able to identify others for cost reductions. Other areas to consider include:

- Reduced freight and shipping costs. Better visibility into shipping operations across the supply chain can enable manufacturers to consolidate and streamline ordering and reduce shipping costs.

- Reduced IT costs. Manufacturers moving from other disparate applications can often redeploy hardware, cut maintenance contracts, and re-devote IT resources to other projects. For example, one customer moving from Oracle to Microsoft Dynamics AX reduced its ongoing ERP support budget by 73 percent.

Microsoft Dynamics AX also leverages the Microsoft .NET Framework and Web services to rapidly integrate with other applications, providing access to data where it's needed on an ongoing basis without additional IT effort.

- Reduced manual data entry and cleansing costs. A single source of information tied to familiar Microsoft Office and other applications often reduces the need for manual re-entry and verification of data as well as the likelihood of errors.

CONCLUSION

Manufacturers are under growing pressure to produce the right products at the right price in the right quantities — while meeting compliance standards and the evolving demands of customers. Traditionally, ERP has been the domain of large manufacturers that could deploy and support complex and rigid systems — beyond the reach of the mid-sized manufacturer. Microsoft and its partners has changed the equation by providing users with industry expertise, flexibility, role-based user interfaces, and functionality to provide greater visibility for decision making across manufacturing and supply chain processes.

Greater visibility enables manufacturers to focus less on the tactical pressures of the marketplace and more on innovation and strategic growth. Organizations moving from disparate or traditional paper-based systems are likely to achieve significant returns from Microsoft Dynamics AX in terms of productivity and visibility alone. Deployed properly, Microsoft Dynamics AX can deliver a positive ROI in fewer than 18 months.