



**NUCLEUS
RESEARCH**

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ROI ANALYSIS YOU CAN TRUST™

The Real ROI from Microsoft Dynamics AX

THE BOTTOM LINE

Independent research conducted by Nucleus showed that 75 percent of Microsoft Business Solutions-Axapta customers had achieved a positive ROI from Axapta with an average payback period of 23 months. The average deployment time was 13.4 months, with a range of 5 months to 36 months for a phased deployment.

Microsoft Dynamics AX, (formerly Microsoft Business Solutions-Axapta), technology is an enterprise business planning application designed to help mid-market companies improve sales, finance, human resources, and other business operations. Key components of the Microsoft Dynamics AX solution include the following:

- Analytics tools, including a business analysis component for standard reporting and a financial management component for accounting and financial reporting.
- Distribution and supply chain management tools, including logistics, trade, and warehouse management components.
- E-commerce tools, including a commerce gateway based on Microsoft BizTalk Server and enterprise portal components to support partner, customer, and employee access to transaction information.
- Manufacturing management tools including components for production planning and management, customized product development, and shop floor control.
- A questionnaire tool to enable development of online surveys to gauge satisfaction of customers, partners, or employees.
- Human resources management tools including components to support business process management, employee recruiting and management, balanced scorecard evaluations, and employee performance management.
- Sales and marketing tools including components for marketing campaign automation and analysis, sales and marketing coordination, sales force automation, telemarketing, and sales management.
- Tools to support design, customization, testing, and debugging of the Microsoft Dynamics AX environment to support a specific business need or process.

Enterprise applications, or ERP applications as they are sometimes known, have not always enjoyed a reputation for delivering a positive return on investment for customers. They are often complex deployments that require input from different business areas, and have often been difficult for customers to successfully customize, deploy, and adopt.

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Although ERP failures have often been blamed on “bad” technology or misplaced trust in unqualified consultants, it takes a combination of careful internal planning and controls, knowledgeable and responsible consultants, and an appropriate technology match for business needs to ensure a positive ROI from an ERP deployment.

To gain further data on best practices in each of these areas, Nucleus undertook this examination of Microsoft Dynamics AX customers. As is Nucleus normal practice for its real ROI series, Nucleus analysts independently contacted Microsoft Dynamics AX customers to gather data for this “real ROI” report, on the behalf of users who need accurate, independent data about the costs and benefits associated with a technology deployment.

THE PROCESS

Nucleus reviewed the Microsoft Dynamics AX Web site, online technology publications and discussion forums, and print journals to identify companies having deployed Microsoft Dynamics AX.

During the course of the research, Microsoft became aware of Nucleus’s report, and was invited to supply customer names to be included in the sample. Nucleus identified 35 customers and contacted each one:

- Sixteen companies agreed to participate in Nucleus’s analysis of the ROI from their Microsoft Dynamics AX deployments.
- Nineteen companies did not respond to repeated requests for participation.

Nucleus has included the data from all customers analyzed in this report. The majority of companies provided details of their deployments on condition of anonymity. Customers included both North American and European companies; euro figures have been converted to dollars to present consistent and comparable data.

Nucleus analysts interviewed companies about various aspects of their Axapta deployments that would impact ROI, including why and when they selected the technology, the deployment process and budget, expected and achieved benefits, expected and incurred costs, training, consulting, deployment challenges, and other issues associated with the deployment.

Seventy-five percent of customers had already achieved a positive ROI from their Microsoft Dynamics AX deployment with an average payback period of 23 months.

Companies that had not yet achieved a positive ROI had all been using the technology for fewer than two years, and Nucleus projects most of them will achieve payback in the next 6 to 18 months.

The average size of an Microsoft Dynamics AX deployment was 120 users, with a low of 35 and a high of 800. A number of customers

were still in the process of adding new users or groups of users to the application.

BEST PRACTICES WITH MICROSOFT DYNAMICS AX

The relatively positive ROI results customers achieved with Microsoft Dynamics AX reflected best practices most customers followed in planning, working with consultants, and in their choice of solutions.

Selecting a Solution: Best Practices

Companies selecting Microsoft Dynamics AX were moving from a variety of homegrown, paper-based, or mainframe systems, and almost all the customers interviewed did a thorough evaluation of key competitors including Lawson, Oracle, PeopleSoft, JD Edwards, and SAP. Although their reasons for choosing Microsoft Dynamics AX varied, they all had clear reasons why Microsoft Dynamics AX was selected over another vendor.

Companies that were most successful with their Microsoft Dynamics AX deployments included both of these key practices in their planning process:

- They included both IT and business in the selection and planning process and performed pilots to test usability.
- They undertook both functional and ROI-related evaluations of their short list of solutions.

Having both business and IT agree on expected costs and benefits — and provide input on selection — keeps technology and political bumps to a minimum when deploying an ERP solution.

This approach resulted in a detailed understanding of how Microsoft Dynamics AX would deliver value, that often went down to specific functional, business, or vertical requirements. Although existing technology was a contributing factor, it was not the deciding factor on which vendor to select:

- *We had 14 different evaluation criteria, including user rating, the partner network, and an understanding of our business. Most of our customers are retail, so we sought a standard system that would minimize problems for our key customers.*
- *We had a scorecard of 600 functional requirements and if a vendor didn't meet them all it was eliminated. Then we did a cost analysis for licenses, modules, implementation, and training. Microsoft Dynamics AX already had strong functionality and was less costly.*
- *SAP was too complex, too huge, and we knew of too many cases of companies that never succeeded with SAP. Oracle is good but too American in the way it is designed. We ran Oracle databases but decided to go with Microsoft Dynamics AX anyway.*
- *It was the cheapest and most flexible solution.*

- *Microsoft Dynamics AX can beat other vendors because they have structured the ability to attach many bills of materials to the same part number – which is very important in pharmaceuticals.*
- *IT found Microsoft Dynamics AX [best] because of its tight connection with Microsoft and SQL Server technology.*

Planning: Best Practices

Companies that were most successful in their deployments included both IT and business in the planning process as well as selection, and focused on ensuring it could be flexible to future business needs, taking care to plan customizations so changes could be made in the future — even if the original project team was unavailable.

Planning the initial deployment as well as keeping an eye on potential future requirements ensures ongoing flexibility and returns from an ERP deployment.

Even though some companies decided on phased deployments because of limited internal resources, only a few spent more time or resources than they initially expected on deployment because they had set the boundaries and customization limits before they started.

This thorough approach ensured that both IT and the business departments had a clear understanding of project goals and plans — meaning clear roles and responsibilities and less “finger pointing” later, as a number of customers explained:

- *A key reason for selecting Microsoft Dynamics AX was high user ratings from our pilot project.*
- *We did a pilot and felt it could be more easily and cheaply installed than others.*
- *We calculated the expected ROI, projected a 2-year payback, and achieved it.*
- *One of my objectives was to leave the company with something someone else could use after I left.*

Working With Consultants: Best Practices

Clear functionality expectations, a focus on key integration and modules first, and selecting consultants that understood both their line of business and their region or country’s way of doing business were best practices most companies deployed to get the most out of consulting and integration services.

Selecting an experienced and knowledgeable services partner is key to achieving a positive ROI from an ERP deployment – and was certainly true with Microsoft Dynamics AX.

As a number of customers in the study were European, it's not surprising that they selected relatively smaller consulting houses with which they were familiar instead of larger services firms. The American customers by and large were working with specific services providers focused on — and experienced in implementing — Microsoft Dynamics AX technologies. As one customer stated, *"The consultant we looked at was capable of implementing all-in-one ERP [and bringing in the other pieces we needed] so there wouldn't be integration problems and multiple consulting bills."*

Most Microsoft Dynamics AX customers worked with partners that had significant experience in deploying Microsoft Dynamics AX, and many of those partners had Microsoft Dynamics AX as a key solution focus. Others with more broad deployments used different partners in different regions to ensure the use of Microsoft Dynamics AX would be appropriate for each user group.

THE BENEFITS FROM MICROSOFT DYNAMICS AX

Companies cited four key benefits leading to a positive ROI from Axapta: staff reductions, reduced IT costs, improved customer and partner satisfaction, and improved operations and visibility.

Reduced staffing costs

Increased productivity was a key savings area for Microsoft Dynamics AX customers, and a number of companies reported they were able to reduce or redeploy staff as a result of their Microsoft Dynamics AX deployment.

Fifty-six percent of Microsoft Dynamics AX customers were able to directly reduce staffing costs as a result of their Microsoft Dynamics AX deployment.

Other companies were able to grow their business while avoiding additional incremental staffing costs, a key savings area a number of customers commented on:

- *With a single integrated view of things, we can add sales without adding employees.*
- *We've had a 40 percent productivity improvement — and were able to reduce people by 30 percent.*
- *Our business has increased but we have four fewer people in a staff of twenty.*
- *When we finished, we laid off 7 FTEs.*
- *Automation has led to personnel savings and inventory improvements. In sales, we dropped from eight people to four people — not just from Microsoft Dynamics AX but from process changes.*

Reduced IT costs

Because many companies were replacing outdated or expensive mainframe systems as part of their Microsoft Dynamics AX

deployment, a number of companies were able to significantly reduce ongoing IT maintenance costs.

Forty-four percent of Microsoft Dynamics AX customers were able to reduce IT costs as a result of their Microsoft Dynamics AX deployment.

In fact, one customer found, *"Our yearly IT costs went down by \$150,000 after we reduced work running on the mainframe."*

Improved customer and partner satisfaction

The integration and e-commerce components of Microsoft Dynamics AX enabled many companies to open up business and ordering information directly to customers and partners, increasing their visibility into order status while reducing the re-entry of data into disparate systems.

Nineteen percent of Microsoft Dynamics AX customers were able to improve customer and partner satisfaction by being "easier to do business with."

One customer said, *"Interfacing very tightly with line of business applications reduced a great amount of rework for our customers."*

Improved operations and visibility

Finally, the most common benefit Microsoft Dynamics AX customers found was the solution's ability to provide an end-to-end view of the business, supporting streamlined operations and greater visibility for identifying and solving problems and issues.

Seventy-five percent of Microsoft Dynamics AX customers reported improved operations and visibility as a result of their Microsoft Dynamics AX deployment.

Actual returns from better operations and visibility ranged from productivity gains to greater inventory turns to improved time to delivery to changes in working capital:

- *With manufacturing, there's more visibility — lower-level staff doesn't need to run back and forth between facilities to manage invoices and transfers and general ledger.*
- *On-time delivery has increased from 95.2 to 99.2 percent.*
- *We can get data more quickly and it's cleaner — and people can get it themselves.*

KEY COST AREAS

In calculating the costs of customers' Microsoft Dynamics AX deployments, Nucleus studied companies' actual and projected spending on software, hardware, consulting, training, and personnel over a 3-year period. All figures have been converted to US dollars to ensure consistency and comparability.

Software

The average initial license price for an Microsoft Dynamics AX customer was \$571,234, with a low of \$50,000 and a high of \$2.55M. The median initial license price was \$168,000.

The average initial license price per user for Microsoft Dynamics AX was just under \$3000.

Consulting

The average consulting expenditure for an Microsoft Dynamics AX deployment was \$1,169,745 with a low of \$50,000 and a high of \$6.8M. The median consulting expenditure was \$600,000.

Hardware

The hardware investment required to support Microsoft Dynamics AX varied widely, especially for those companies that were retiring another solution: a number of customers reused existing servers and one customer actually saved money on hardware by moving to Microsoft Dynamics AX. For customers that did make a hardware investment, the average hardware spend was \$180,188 and the median spend was \$84,750.

Table 1. The Average 3-Year Cost of an Microsoft Dynamics AX Deployment

<i>Initial Costs</i>		
	Average	Data Components
Software	\$571,234	Average initial license price
Consulting	\$1,169,745	Average standalone consulting expenditure of customers interviewed
Hardware	\$180,188	Average hardware expenditure of customers interviewed
Personnel	\$346,667	Average number of personnel needed to deploy: 4 Average time of deployment: 13 months Assumed fully loaded cost of an employee: \$80,000
Training	\$141,375	Average number of users: 195 Average training time: 29 hours Assumed fully loaded hourly cost of an end user: \$25
Total	\$2,409,207	Average initial cost of deployment
<i>Ongoing Costs</i>		
Software maintenance	\$274,192	Average maintenance rate: 16% Average initial license price:

		\$571,234
Personnel	\$576,000	Average number of FTEs required to support Microsoft Dynamics AX: 2.4 Assumed fully loaded cost of a support FTE: \$80,000
Total 3-year costs	\$3,259,399	Average 3-year costs of software, consulting, hardware, personnel, training and maintenance.

Personnel

Companies invested in both initial personnel to plan and manage the deployment, and ongoing personnel to support the solution. In some cases, Microsoft Dynamics AX customers outsourced the solution's ongoing support to a business partner.

The average personnel cost to deploy Microsoft Dynamics AX was \$346,667 and the average annual ongoing cost was \$192,000.

Table 2. The Median 3-Year Cost of an Microsoft Dynamics AX Deployment

<i>Initial Costs</i>		
	Median	Data Components
Software	\$168,000	Median initial license price
Consulting	\$600,000	Median standalone consulting expenditure of customers interviewed
Hardware	\$84,750	Median hardware expenditure of customers interviewed
Personnel	\$220,000	Median number of personnel needed to deploy: 3 Median time of deployment: 11 months Assumed fully loaded cost of an employee: \$80,000
Training	\$72,000	Median number of users: 120 Median training time: 24 hours Assumed fully loaded hourly cost of an end user: \$25
Total	\$1,144,750	Median initial cost of deployment
<i>Ongoing Costs</i>		
Software maintenance	\$75,600	Median annual cost of license maintenance: 15% Median initial license price: \$168,000

Personnel	\$300,000	Median number of FTEs required to support Microsoft Dynamics AX: 1.25 Assumed fully loaded cost of a support FTE: \$80,000
Total 3-year costs	\$1,269,950	Median 3-year costs of software, consulting, hardware, personnel, training, and maintenance

Training

On average, companies gave users 29 hours of Microsoft Dynamics AX training as part of their deployment, but that number ranged from two hours to 80 hours. A number of customers noted that the user interface design was relatively intuitive and user pilot testing accelerated adoption and reduced training time. One customer moving from an older system said, *"It's a breath of fresh air to be in Windows."*

DEPLOYMENT CHALLENGES

The key deployment challenge a few customers faced with Microsoft Dynamics AX (which is very common across ERP as a whole) was issues with customization — either they ended up doing more customization than expected or found the customization was more difficult and time consuming than they had planned. Customers that didn't have problems in this area benefited from pilot programs to evaluate the needs for customization and a close collaborative relationship with their services partner.

CONCLUSION

ERP doesn't have to be synonymous with bad ROI. In fact, when it is properly selected, planned, and deployed with the help of qualified partners, an ERP solution can deliver significant returns for an organization. Seventy-five percent of Microsoft Dynamics AX customers had achieved a positive ROI from their Microsoft Dynamics AX deployment and the others were well on their way to achieving ROI — largely because they had a clear roadmap and experienced guides to help them get there.

In the past, Nucleus has often found ERP deployments are undertaken because of a company mandate or strategic decision, but this wasn't part of the story for the Microsoft Dynamics AX customers analyzed here. They started their projects with clear business goals in mind and, in most cases, avoided the politics, scope creep, and delays that often happen when there are none — or too many — chefs stirring the ERP pot. Companies looking to maximize returns from Microsoft Dynamics AX and other ERP deployments today should:

- Get IT and business together to define needs and requirements up front and get user buy-in.

- Evaluate products both on real functional requirements and ROI
 - and build milestones for both into your deployment plans.
- Keep customization limited to ensure you'll be able to upgrade and adapt in the future without significant rework.

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