# Semiconductor Manufacturer Gains Independence from Costly Legacy ERP Systems with Dynamics AX

**Technical Case Study**

## Business Challenge

Microsemi Corporation engages in the design, manufacture, and marketing of analog and mixed-signal integrated circuits (IC) and semiconductors primarily in the United States, as well as in Europe and Asia. Microsemi Corporation markets its products directly, as well as through electronic component distributors and independent sales representatives. It serves the security and defense, aerospace, enterprise and commercial, and industrial and alternative energy markets. Microsemi Corporation was founded in 1960 and is headquartered in Irvine, California.

Microsemi is composed of 18+ companies, with global operations, including many manufacturing plants around the world. The company serves premier firms in five broad markets: mobile/connectivity, notebooks/LCD TV/display, medical, defense, and commercial air/space. Microsemi has 2,800 employees in approximately 20 locations in California, Massachusetts, Oregon, Arizona, China, Ireland, Israel, Macau, and France.

The semiconductor manufacturer is a self-proclaimed "serial acquirer" of companies, and has an aggressive strategy around growth through acquisition. Their target acquisitions include companies with specialized and differentiated technologies related to aerospace, military, medical, and consumer electronics in areas of limited competition.

## Business Improvements

Microsemi runs Microsoft Dynamics AX as its single integrated corporate wide ERP solution on a SINGLE SQL database. Prior to selecting Microsoft Dynamics AX in 2003 over Oracle and SAP, Microsemi managed all its finance and operations data on a homegrown system. Over a period of six years, the company systematically has replaced multiple instances of Oracle and SAP and other tier 2 and tier 3 systems in the more than 18 companies it has acquired. MSC has also become 90% self-sufficient at rolling the product out to new acquisitions with very little external help required.

"When we looked at the technology platform of Microsoft Dynamics, we realized this was a product that would be key to our growth strategy," said Jason Thorpe, Director of Enterprise Applications & Development at Microsemi. "As we've converted acquired companies with tier 1 ERP solutions over time, we've not seen any feature gap within Dynamics."

In 2003, Microsemi was an early adopter of Dynamics AX (then called Axapta 3.0) with 80 users. Today, the company utilizes Dynamics AX 2009 with 264 concurrent user licenses shared by 500 heavy users and 1,125 light users. Microsemi runs a lean IT department, spending less than one percent of its budget on maintaining Dynamics AX while comparable firms spend 2-3 percent of their budgets on IT maintenance.

Originally, Microsemi deployed Dynamics AX to manage financials, trade and logistics, inventory management, purchasing, and multi-company transactions.  The company has built a Center of Excellence around Dynamics AX, including a world class development team and a dedicated group of business analysts on its acquisition integration team.  With each new acquisition, Microsemi is able to quickly address any ERP system gaps they encounter because of the agility and flexibility in Dynamics AX that makes customizations faster, cheaper and easier than in SAP or Oracle.

Dynamics AX is the development platform for all of Microsemi's business solutions and the semiconductor manufacturer was pleased to find the intellectual property they needed in Armanino's High Tech Industry Suite of Solutions in 2004.  Since that time, Microsemi has participated in a true client partnership, investing in the ISV solution and helping to direct its design.

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**Jason Thorpe**
*Director of Enterprise Applications & Development*
Microsemi

"Armanino has been an invaluable resource in moving us forward," said Thorpe. "This investment has paid off for us.  Whenever an upgrade for the High Tech Industry solution is available, we have the functionality we require included in the new version, without having to redevelop modifications."

Today, Microsemi also uses intercompany, production, supply chain integration, web portals, multi-site, Armanino's High Tech Industry for semiconductor manufacturing, and Distributor Sell-Through Management for channel sales partners.  The company has extended the footprint of its Dynamics AX implementation through the usage of Dynamics AX Enterprise Portal to develop out a full-featured MES solution for its Wafer Fabs.  Microsemi has also incorporated the following ISV solutions into its Dynamics AX system:

- High Tech Industry, Supply Chain Integration, and Distributor Management Module from Armanino
- Atlas XL from Globe Software
- Targit Business Intelligence

As a publicly traded company, Microsemi benefits from the improved processes and record-keeping made possible by each of these software solutions, providing the transparency that is key to achieving Sarbanes-Oxley (SOX) compliance.

Finally, Microsemi's experience has proved the ease of use and flexibility in Dynamics AX and its modules.  When Armanino began supporting Microsemi with its implementation of Dynamics AX in the early days of its ERP transition, 90 percent of the work was done by the firm's consultants and 10 percent by Microsemi's internal team.  With Microsemi's latest acquisition, that ratio for implementation work was fully reversed.

"When you think of the word partner, you think of an organization that is closely aligned with you and that understands your business," said Thorpe. "Microsemi has chosen to align with Microsoft partners that are strong in our vertical space, like Armanino. These partners are working with us and almost ahead of us in developing solutions for our industry."

Microsemi is self-sustaining in terms of maintaining and upgrading Dynamics AX as an enable of low total cost of ownership.

- They assess new capabilities in each new release, as well as new capabilities in partner modules, to identify which custom components they need to migrate in the new releases.
- Microsemi's corporate objective is to leverage the product and partner solutions of new releases and to reduce the number of company-supported customizations in new releases of Dynamics AX products.
- The company provides the bulk of effort around the migration for its newly acquired companies and leverages partners for point expertise on upgrades.

"We have transitioned from our role as an implementer to that of a trusted advisor and enabler of Microsemi's self-sufficiency," said Chris Moore, Partner-in-Charge of Microsoft Dynamics for Armanino. "We take pride in the partnership we have built with this leader in the semiconductor industry to continuously improve the Dynamics product and our High Tech Industry suite of solutions."

## Business Benefits

- Streamlined operations with single Dynamics ERP solution for multiple acquired companies
- Reduced IT budget to 50 percent or less of competitors' spend
- Customized Dynamics AX and ISV modules to support specific business requirements
- Enhanced SOX compliance

## For More Information

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For more information about Microsemi products and services, call (800) 713-4113 or visit the Web site at: www.microsemi.com.

For more information about Armanino products and services, call (925) 790-2600 or visit the Web site at www.amllp.com/microsoft-dynamics.

## Microsoft Dynamics

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