



## BUSINESS PROFILE

FLOW INTERNATIONAL IS A LEADING MANUFACTURER OF ULTRAHIGH-PRESSURE WATERJET TECHNOLOGIES USED IN INDUSTRIAL APPLICATIONS. THE COMPANY HAS OVER 600 EMPLOYEES IN 16 OFFICES AND IS BASED IN KENT, WASHINGTON, USA.

## BUSINESS/IT CHALLENGE

FLOW STRUGGLED WITH A COMPLEX IT INFRASTRUCTURE THAT INCLUDED AN AGING, HEAVILY CUSTOMIZED ERP SYSTEM, MANY DISPARATE SYSTEMS, AND INCONSISTENT BUSINESS PROCESSES. THIS MADE IT DIFFICULT TO SHARE INFORMATION ACROSS THE ORGANIZATION.

## SOLUTION

- MICROSOFT DYNAMICS AX

## BENEFITS

- CHARTS OF ACCOUNTS REDUCED FROM 10 TO 1
- 75% DECREASE IN MONTH-END CLOSING TIMES
- MORE CONSISTENT BUSINESS PROCESSES
- INCREASED VISIBILITY INTO THE BUSINESS

## GLOBAL MANUFACTURER SIMPLIFIES IT STRUCTURE, BUSINESS INFORMATION WITH NEW ERP SOLUTION

### OVERVIEW

Flow International Corp. is a pioneer in ultrahigh-pressure waterjet technology used in a wide range of industrial applications—everything from cutting metal in small machine shops to fabricating parts for commercial jetliners to blasting the paint off offshore oil rigs. Having grown by acquisition and establishing offices in various countries, Flow's divisions operated as separate companies, many using different systems and often having inconsistent business processes. Focused on manufacturing and growing the waterjet industry, Flow hired local accounting and IT personnel knowledgeable in their local regional and legal requirements. These personnel acquired or developed local systems based on their own experience and expertise. Flow was also burdened by an aging, heavily customized ERP system that was inflexible and difficult to extract information from. The company sought to simplify its business information and bring its 16 global divisions together as one company on a single ERP technology platform. Flow chose Microsoft Dynamics® AX as its solution and Tectura as its worldwide implementation partner. As a result of this project, Flow has been able to simplify its IT structure and business processes, improve access to information, reduce costs, and streamline its financial reporting processes.

### SITUATION

Flow International Corp. is a leading manufacturer of ultrahigh-pressure waterjet technologies used in a host of industrial applications, from stripping paint off ships to precisely cutting thick metal or stone. Founded in the early 1970s by two former research and development scientists from Boeing, Flow was the first to commercialize the use of an ultrahigh-pressure waterjet as an industrial cutting tool for cutting soft materials and grew initially from disposable diapers and tissue paper applications. The company later invented and patented the abrasive waterjet system to cut hard materials up to 12 inches thick.

The markets Flow serves include aerospace, automotive, job and machine shops, paper, food, art and architecture, industrial cleaning, surface preparation, food processing, and many specialty applications. Since 1974, Flow has delivered more than 10,000 waterjet and abrasive waterjet systems to customers in more than 45 countries. Based in Kent, Washington, USA, Flow is publicly held (NASDAQ: FLOW) and has over 600 employees in 16 offices across the U.S., Europe, Asia, and South America.



In addition to developing its own technology, Flow has acquired additional expertise, technology, and market share by acquiring companies with expertise in key complementary areas such as XY motion control cutting tables across the globe. Flow allowed these business units to keep their existing business practices and operate largely autonomously. All were set up as separate companies, with different item masters and different charts of accounts. Many business units also retained their existing systems, which were often incompatible with Flow's core enterprise resource planning (ERP) system.

"As the company's business needs and market changed, Flow's highly customized ERP system developed a reputation as being inflexible, difficult to access, and problematic to upgrade," says Martin Walker, Director of IT Architecture & Engineering at Flow. To help perform their job duties, Flow's employees worldwide devised creative ways to circumvent the system. As a result, many workarounds, local spreadsheets, Microsoft Access databases, and custom web applications sprung up across the organization. While they helped Flow's employees get their jobs done, they also created silos of information and imposed a burden on IT resources. At one point, Flow had approximately 200 different, overlapping enterprise and line of business applications.

The sheer number and disparate nature of Flow's systems created issues. For instance, without a single, standardized repository for all business data, the

company had difficulty monitoring its sales pipeline and seeing inventory across all its locations. In some cases, Walker says, "clever customers even tried to play one division off the other to get better deals." Flow also struggled with duplicate entry of product, inventory, and customer data across many processes and functional areas. For example, Flow found that from the time a transaction went from opportunity to the time payment was received, the company may have entered the same customer data up to seven different times.

Flow's sprawling systems and inconsistent business processes created difficulties for its accounting staff. With each business unit operating as its own company, accounting practices differed from one location to another. At month-end close, Flow's accounting staff spent days reconciling reports from various systems and spreadsheets, performing various manual calculations, and working to comply with Sarbanes-Oxley reporting requirements. Flow's European accounting staff alone spent up to two days consolidating the region's monthly financial statements.

## SOLUTION

Flow made a commitment to simplifying its business information. The company determined that by allowing its business units to operate autonomously, it wasn't taking full advantage of the efficiencies it could enjoy as a single entity. Eager to simplify business processes and bring its operating units together under one common structure, company decision makers realized that its next ERP solution

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Director of IT  
Architecture & Engineering  
Flow International

would be critical to reaching its goal of making the complex simple. “We were looking for a system that could help us achieve our vision of one company,” Walker says.

Initially, Flow decided to upgrade to a newer and more flexible version of the ERP solution it was then running. But a chance encounter Walker had with a Microsoft representative he'd worked with in a previous position led to a suggestion that Flow consider Microsoft Dynamics AX.

Flow's IT committee began considering Microsoft Dynamics AX, and painstakingly evaluated it against the company's proposed solution. After a thorough review, the committee found Microsoft Dynamics AX to be the superior solution and unanimously recommended it. “The more we thought about it, the more we began to think that Microsoft Dynamics AX could be a game-changer for us,” Walker says. “It was a more flexible and agile solution, and something we could use as a platform to innovate from.”

“Cost was a determining factor as well. Flow carefully evaluated the software and implementation costs associated with both solutions,” says Daric Schweikart, Flow's Vice President and Chief Information Officer. The company even brought in consultants to quantify the amount of customization required for both solutions to meet Flow's business needs. Flow determined that Microsoft Dynamics AX

required far less customization out of the box and that its overall cost would be significantly less than JD Edwards. “From a business standpoint, Microsoft Dynamics AX enjoyed a considerable price advantage,” Schweikart says.

Equally compelling, he says, was the fact that Microsoft Dynamics AX complements other Microsoft technologies Flow uses, including Microsoft SharePoint, Microsoft SQL Server, and the Microsoft Office productivity suite. “This allows us to manage a single IT infrastructure versus multiple ones, which is a huge advantage,” Schweikart says.

With a proposed new solution in hand, Flow sought the right Microsoft Dynamics partner to implement, configure, and customize it to meet the company's business needs. Because the implementation would be conducted across several continents and over the course of more than a year, Flow narrowed its list to two Microsoft partners experienced in managing large, global deployments: Tectura and another organization.

After an exhaustive review process, Flow chose Tectura as its implementation partner. The company cited several reasons for the selection, including Tectura's experience with Microsoft Dynamics AX and its strong track record of successful global implementations. In addition, Walker says, “We liked the quality

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Another factor that favored Tectura was its global footprint. Tectura has offices and staff in more than 20 countries worldwide, including ones in which Flow has divisions. “It just seemed that everywhere we had a presence, Tectura had one, too,” Walker says.

Tectura took a business-process approach to implementing Microsoft Dynamics AX. This approach focuses primarily on the client’s business processes, with the application modules acting as tools to support the implementation. Tectura and Flow evaluated and worked to redefine about 100 of Flow’s most critical business processes. This encompassed everything from changing the way Flow enters sales orders and recognizes revenue to creating and maintaining a new global bill of materials and creating a single global chart of accounts.

As Tectura and Flow worked together to redesign the business processes for increased efficiency, Flow’s executives sought to enlist the support of the people who would be using Microsoft Dynamics AX. Flow executives embarked upon a worldwide roadshow during which they outlined their vision for the system and solicited employee feedback on it.

“Early on we realized that this was much more than simply a software installation,” says Walker. “It was truly a business-change project.” Flow likened the transformation to a climb up Mount Everest. In scaling the world’s tallest peak, mountaineers don’t simply ascend to the top at once; rather, they establish a base camp and proceed upward gradually and deliberately from that camp. Because Microsoft Dynamics AX would be a platform for future innovation, Flow dubbed the global implementation “Project Basecamp.”

Tectura’s 11-person implementation team built a design prototype in just six weeks. Tectura then deployed Microsoft Dynamics AX, including Manufacturing, Purchasing, Warehousing, Sales, Projects, Human Resources, Shop Floor Control, and Consolidations modules, in Europe, followed by Flow’s two locations in the US and one in Canada.

But as the implementation began gathering steam, the project was hammered by the worldwide economic downdraft. With the economy souring and sales slowing, Flow was forced to trim staff, which depleted the resources it was able to dedicate to the implementation. But Flow remained steadfast and committed to the project. Company executives felt that if they could see the project through, Flow would emerge from the recession stronger and more agile.



“Flow had the fortitude to continue with this project at a point when their business was suffering a significant downturn,” says Scott Huckleberry, who led the Flow implementation for Tectura. “Their leadership had the vision to stay true to their long-term strategy.”

## BENEFITS

Flow has already begun to realize many of the benefits it hoped to achieve from standardizing on a single Microsoft Dynamics AX solution. Flow now benefits from:

### **Simplified, More Consistent Business Information**

Flow’s deployment of Microsoft Dynamics AX has enabled the company to address its goal of simplifying and streamlining its business information and processes. “With Microsoft Dynamics AX we are now operating as one single company and doing things one uniform way, which wasn’t the case before,” Schweikart says.

Microsoft Dynamics AX has enabled Flow to go from...

- 10 charts of accounts to 1 global chart of accounts
- 160 departments to fewer than 50
- 233 cost centers to approximately 50
- ~10 item masters to one universal item master

### **Faster, More Accurate Financial Reporting**

In the past, Flow’s accounting staff struggled to manually create financial statements using information pulled from disparate systems, various ad hoc reports, and spreadsheets. The company now benefits from consistent accounting processes across its global operations, which has helped to improve data accuracy and reduced the time spent preparing reports. Since Microsoft Dynamics AX was implemented in Flow’s European offices, the two days it previously took the company’s accounting staff to consolidate and prepare month-end financial statements has shrunk to just four hours—a 75% decrease.

### **Increased Visibility into the Business**

The combination of an inflexible ERP system and various other systems used to mean that Flow lacked timely, reliable global data with which to make business decisions. Reports that detailed such critical business drivers as sales, opportunities, KPIs, costs, inventory levels, and more, were created manually, a time-consuming and potentially error-prone process.

With Microsoft Dynamics AX as its single repository for business information, Flow benefits from increased visibility into virtually all aspects of its business. In many cases, Walker says, information that

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Vice President and CIO  
Flow International

was once compiled manually from numerous sources is automatically available through Microsoft Dynamics AX. For example, Walker noted that Microsoft Dynamics AX has enabled Flow to create a sales funnel that quickly provides up-to-date information about opportunities and sales progress through a single report. “We don’t have to guess anymore,” he says. In addition, key business metrics such as daily sales average are available directly from within the system.

Microsoft Dynamics AX provides Flow with high-quality data needed to run its business efficiently and effectively. “Fundamentally, Microsoft Dynamics AX has changed our company because it has allowed us to manage our business with data,” Schweikart says. “From an executive standpoint, you can’t ask for anything more.”

For instance, the company recently noticed that it wasn’t meeting its timeliness standards for shipping products. Using the information now available through Microsoft Dynamics AX, Flow was able to identify the bottleneck and resolve the problem in just a couple weeks. “We would not have been able to solve this problem with our old system. It didn’t give us that kind of information, so we would have just thrown bodies at it,” Schweikart says. “But with Microsoft Dynamics AX we have a single source of the truth, which allows us to make decisions based on solid data, not anecdotes.”

### **Reduced Costs through Less Duplicate Entry of Data**

By Flow’s own calculations, the company was spending millions of dollars a year on duplicate data entry. By consolidating its operations on Microsoft Dynamics AX and a single database across the organization, Flow has dramatically reduced its need to enter data multiple times. One key to this was through the implementation of a global item master, which has helped ensure more consistent inventory data and reduced the need for redundant data entry. In the past, common inventory items needed to be set up in each local instance of Flow’s software. With the global item master, common items are entered once at a global level, then published to each division and updated with purely local attributes as necessary.

Tectura also deployed a global address book, which allows Flow to easily share customer information and activities across its entire Microsoft Dynamics AX company structure. This reduces the need for re-entry of customer data, provides Flow with the ability to view customer information across the entire organization, and improves sales coordination by being able to view common customers across regions.

### **Easier Access to Information**

In the past, system users had so much difficulty getting information from the system that they resorted to alternate

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systems and workarounds. “With Microsoft Dynamics AX people are now doing more in the system than they were before, and the workarounds are disappearing,” says Walker. What’s more, information is now more readily available to Flow’s system users. “With Microsoft Dynamics AX, our users can get at data quickly, pull it out, drop it into Microsoft Excel, and do with it what they want,” Walker says. “It’s quite a change from before.”

### **A Strong Business Partner with a Global Presence**

According to Schweikart, Tectura’s global reach has helped make his job easier. “Tectura is one of few companies in the world that has a global footprint to match our footprint, and there are incredible advantages to that,” he says. For example, he points to Tectura’s upcoming implementation of Microsoft Dynamics AX to Flow’s division in China. “Tectura’s Chinese resources will be supporting us, which means I won’t be getting phone calls in the middle of the night.”

In addition, Schweikart says, he was impressed with the quality of Tectura’s people. “Tectura brought in people who not just understood Microsoft Dynamics AX, but who also understood our business and the technology we use. So if we start talking about a bill of materials, they understand that. That’s brought a tremendous amount of value to us.”

## **ABOUT TECTURA**

Tectura is a worldwide provider of business consulting services providing sustainable value through consulting, software and IT implementation. Our clientele include mid-sized companies and larger enterprises throughout the Americas, EMEA, and Asia Pacific. With team members in 20+ countries, Tectura applies its comprehensive industry knowledge and unparalleled experience in collaboration with our clients to deliver business and technology strategies and solutions designed to achieve their business performance goals.

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