

# Collaboration Helps an Innovative Technical Connection Take Flight

*Northern Tool + Equipment and Vertex Connect  
on an ERP Integration*

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The analogy of swapping out a jetliner's engine while mid-flight can describe complex organizational overhauls conducted during the blur of daily business challenges. This analogy perfectly captures the risks that were mitigated when retailer North Tool + Equipment replaced its Oracle JD Edwards enterprise resource planning (ERP) system with Microsoft Dynamics AX, while sustaining integration with Vertex® Indirect Tax O Series®, all while managing fast-changing sales tax challenges.

Northern Tool + Equipment could not have had a more skilled or experienced pilot in the cockpit than with Sales Tax Manager Jason Davenport, a former Best Buy tax technology manager who possesses extensive knowledge of the tax software market. "I've done a lot of tax technology implementations, and I always thought that sales tax issues don't get any more complex than at Best Buy," Davenport said. "However, I've recently learned that Northern Tool + Equipment's sales tax challenges are just as complicated because we sell so many different product lines, through a number of different channels, that are subject to numerous and varied types of taxes."

Davenport credits his co-pilots at Vertex with helping the Vertex integration into Microsoft Dynamics AX succeed. And, while sales tax complexity features prominently in Northern Tool + Equipment's ERP implementation and integration experience, the real story is about how high quality collaboration between Vertex and its customer Northern Tool + Equipment, mitigated that complexity.

"The Vertex team was so receptive to my requests," Davenport explained. "We worked closely together to figure out what our needs were and how to address them."

## **Omnichannel Sales Tax Challenges**

Created in 1980, Northern Tool + Equipment has come a long way since its founder and CEO Donald Kotula began selling cylinders, valves and how-to manuals for log splitters by mail from his home in Minnesota. In 1991, Northern Tool + Equipment launched a manufacturing business that builds log splitters, generators, pressure washers, air compressors and other products under its NorthStar brand. Today, Northern Tool + Equipment sells more than 40,000 products through 90-plus US stores, as well as through print catalogues, call centers and its online channel, [www.NorthernTool.com](http://www.NorthernTool.com).

The company's omnichannel capabilities and relationships with so many customers based throughout the US result in a dizzying number of sales tax requirements, fees and exemptions. Some of these requirements are particularly complicated due to the plentiful rules that determine when, and to what specific products, fees and/or exemptions apply. For example, some states administer tax holidays on certain dates for products that have earned the ENERGY STAR designation. Other states offer sales tax holidays on certain dates for various products, such as those qualifying for hurricane preparedness. Texas imposes a fee on the sale of new and used lead acid batteries—a fee that varies according to battery voltage. Select agricultural and government customers in some states are subject to partial sales tax exemptions.

"Obviously, it's a challenge to manage all of these different tax exemptions, fees and rates," Davenport noted. "Plus, tax rates and rules change constantly."

Northern Tool + Equipment implemented Vertex O Series four years ago to help manage all of this complexity—a decision that Davenport was happy to learn about when he joined the company from Best Buy in 2013. During his 10 years with the electronics retailer, Davenport played a central role in building Best Buy's tax reporting capability. He also was a manager in the company's tax technology, a responsibility that schooled him in just about every tax software solution on the market. "I knew all of the tax software providers including their strengths and weaknesses," he said. "And I think Vertex is the best in the class."

The problem that Davenport encountered when he joined Northern Tool + Equipment was that the company was planning to migrate to a new ERP system. He knew that the shift from Oracle JD Edwards to Microsoft Dynamics AX would need to keep the integration with Vertex O Series intact—or else serious tax compliance problems and related risks could materialize.

## **Risks of Engine Failure**

If an imaginary team of mechanical engineers replaced a jet engine while being 35,000 feet in the air, they would want to ensure that the airplane's other crucial systems, especially those that rely on the engine to function, remained operational during and after the surgery. If the aircraft's environmental control system went offline,

for example, the air supply could cut off or the cabin pressurization might fluctuate.

Similar considerations and concerns exist in the decidedly more realistic scenario of an ERP switchover. If Northern Tool + Equipment's tax automation system, which is connected to the ERP system, was shut off after the ERP implementation, potentially damaging business problems would quickly arise.

"Omnichannel retail is a tough tax environment," Davenport said. "Companies can get sued if they charge too much or too little sales tax."

Tax management hiccups that occur during an ERP switchover also can harm customer relationships. This qualifies as a risk that absolutely must be avoided at Northern Tool + Equipment, whose first two core values—*know your customer and provide value*—are all about fostering and sustaining a top-notch customer experience. The company did not want the ERP switch to compromise tax management activities. "We strive to deliver the best customer experience possible," Davenport asserted, "and accurate tax calculations are critical to supporting a great customer experience."



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Having a tax automation tool that overcomes sales tax complexity also enables Northern Tool + Equipment to enter into new product lines more efficiently. Rather than calling on the information technology (IT) function to spend weeks upgrading a piece of homegrown tax technology, Davenport says that sales tax rates, exemptions and other requirements that apply to a new product line are quickly reflected in Vertex O Series. As Davenport noted, "That really helps our speed to market, which is a win."

Given what Northern Tool + Equipment risked if its tax calculation process was interrupted by the ERP changeover, Davenport worked closely with his Vertex partners to ensure that the integration between Vertex O Series and Microsoft Dynamics AX would maintain the same high quality of tax calculation that the company experienced with its Oracle JD Edwards ERP system.

## Collaborating on Connector

The objective of the collaboration was straightforward: Davenport wanted Vertex O Series to integrate with Microsoft Dynamics AX in a way that ensured seamless tax management within the ERP while leveraging all Vertex O Series functionality for sales tax rates and rules management. Davenport and his Vertex partners opted for a simple configuration, that:

- Created and set the Vertex general ledger (GL) sales tax code;
- Enabled dynamic capabilities;
- Established Vertex connection settings;
- Set item tax group;
- Set customer tax groups;
- Configured address cleansing; and
- Calculated the tax.

This approach identified which items in Microsoft Dynamics AX will be processed by Vertex for tax calculations; established (or assigned) sales tax groups for each new item; set a Trusted ID as well as endpoints for tax calculation; and met address-cleansing needs. The Connector also allows for the mapping of specific items to large tax groups, and controls taxability for non-standard rates.

Perhaps the most critical piece of this streamlined configuration allows Northern Tool + Equipment's tax professionals to create item-level sales tax codes that trigger tax calculations within Vertex O Series. The item-level sales tax codes ensure that all of the transactions associated with it are sent to Vertex O Series for sales tax calculation. The rest of the configuration allows Northern Tool + Equipment to organize multiple products into a single group. Similar organization can be applied to multiple customers, which can be assigned to a single customer group.

Davenport points to the ability to leverage Vertex O Series flexfields from within the Microsoft Dynamics AX interface as being another key benefit of the Connector. This feature is particularly helpful in addressing the unique rules, exemptions and fees that apply only to certain Northern Tool + Equipment products in certain states and/or at certain times of the year (e.g., battery fees in Texas, California’s electronic waste fees, and Energy Star tax holidays). Flexfields allow additional product data elements, such as the length of an LCD screen or the voltage of a battery, to be passed from AX tables to Vertex O Series for the purpose of tax calculations. “We can pass the actual voltage amount from AX to a Vertex flexfield to trigger fees back to our AX platform,” Davenport explained. “Or, say we sell 50 types of dishwashers and only half of them have the Energy Star designation; we use flexfields to identify the Energy Star dishwashers. We can pass these types of crucial data elements to flexfields via the Connector, while building rules within the Vertex environment to automatically handle tax exemptions, partial exemptions and more.”

At a high level, the Connector enables the correct sales tax calculations to be fully integrated into the accounts receivable, invoicing and projects modules within Microsoft Dynamics AX.

## Know Your Data Elements and Other Success Factors

Davenport and his Vertex partners worked on completing the Connector configuration in advance of Northern Tool + Equipment’s go-live implementation of Microsoft Dynamics AX. While Davenport’s experience and

familiarity with tax technology proved highly beneficial to the connection effort, he identifies several other keys to success, including:

- **Product and Company Knowledge:** Since Davenport works within Northern Tool + Equipment’s tax function, he has gained comprehensive exposure to all of the company’s tens of thousands of products—along with the tax rules, fees, surcharges and exemptions they are subject to. Davenport said, “While working at Northern Tool + Equipment, I’ve had the opportunity to build partnerships with colleagues who work on the sales side, in our call centers and in other parts of the business. This truly helped the tax team understand the breadth of products we sell and the legion of tax rules with which we must comply.”
- **Totality and Flexibility:** Although Davenport felt confident about his knowledge of Northern Tool + Equipment’s many product lines, he reached out to counterparts in other retailers to compare notes to make sure the product list he created was complete. “Of course, if I did miss anything,” he added, “I knew I could quickly map it to a flexfield, which is why this Connector is so valuable.”
- **Partnership:** Davenport lauded his partners at Vertex for their responsiveness and problem-solving acumen. “They were extremely receptive to my questions and requests,” Davenport noted. That partnership freed Northern Tool + Equipment from worrying about tax compliance risks, and enabled them to focus their full attention and energy on swapping out ERP systems.

## About Vertex

Founded in 1978, [Vertex Inc.](#) is the leading provider of corporate tax software and services to automate, integrate, streamline or outsource tax processes for companies of all sizes, from small to medium-sized businesses to global multinationals. Vertex provides solutions for all tax types with industry-specific solutions for retail, communications, hospitality and leasing industries.

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