



Solution name: Oil Country OS
Company: Arecon Data
Website: www.oilcountryos.com
Country or region: United States

Company profile

Arecon Data develops inventory management and supply chain software specifically designed for OCTG, line pipe, drill pipe, and oil-field equipment.

Supporting Microsoft software and services

- Microsoft Azure App Service
- Microsoft Azure RemoteApp
- Microsoft Azure SQL Database
- Microsoft Visual Studio

“We wanted to create a system that workers with little technical savvy could learn and use quickly.”

Maria Arms, Vice President of Business Development and Consulting, Arecon Data

70% of all steel used in oil and gas production is pipe.

Pumping data through the cloud to help pump oil out of the ground

“Through Azure...we can scale things very quickly, which is a real benefit to customers in a volatile industry.”

Jeff Arms, President and Founder, Arecon Data

Arecon Data provides solutions for managing probably the most vital pieces of equipment for the oil and gas industry: Steel Pipe. From distribution centers to oil fields to inspection centers, workers can use Oil Country OS to track and manage everything about OCTG and drill pipe until it is ready for the scrap pile. Hosted in the Microsoft Azure cloud, the solution helps every business that deals with pipe to eliminate errors, increase efficiencies, improve financial results, and even reduce environmental impact.

A small part with a big impact

For most people, pipe is an uncomplicated thing that only matters when it is clogged or broken. However, for people working in the oil and gas industry, pipe is critical for day-to-day production of petroleum and petroleum by-products. In the industry, the term for pipe is oil country tubular goods (OCTG) and drill pipe. The businesses handling tubulars range from the largest Fortune 500 oil exploration and production companies to small pipe yards or inspection contractors with fewer than 10 employees. Oil Country OS is the Microsoft Azure cloud-based solution that helps them all track it. “Our solution does what the industry calls cradle-to-grave tracking for every industry segment that touches OCTG,” says Maria Arms, Vice President of

Business Development and Consulting at Arecon Data. “OCTG can be in the field for 30 years before it goes to scrap. It’s very expensive, and it’s tracked by joint—which is a piece—and is bought and sold in tenth-of-a-foot lengths. Imagine buying, selling, and tracking a box of pencils of varying lengths and sizes, different strengths and capacities.”

Many companies track tubulars using legal pads in the field. Others use spreadsheets or Microsoft Word docs, and some are even relying solely on their financial systems to track physical inventory. These methods lead to overstocking, inefficient or lost inventory, and delays in the billing process, which have a very real effect on the bottom line.

To the well and back again

When an exploration and production company finds oil, it needs pipe to get the oil out of the ground. The company may create a purchase order (PO) for 100,000 feet of OCTG, but it may be delivered in partial shipments over time. Oil Country OS enables those companies to track both the full order and the partial shipments, which provides a real financial advantage. Maria Arms explains, "Using our solution, companies can enter partial shipments into their financial system as they receive them. Otherwise, the financial system assumes they've received the full order, which means they're immediately required to pay taxes and insurance on everything." In addition, Oil Country OS makes it easier for companies to bill each well site for the tubulars and equipment used per month.

By using Oil Country OS, the exploration and production companies can track which inspection facility received the pipe for inspection and map everything that happened to it. OCTG that is inspected and in good working condition is put back into production; anything that doesn't pass inspection is sold for scrap or structural projects. Because Oil Country OS integrates with back-office financial systems, the exploration companies can also use the system to track sales of scrap pipe.

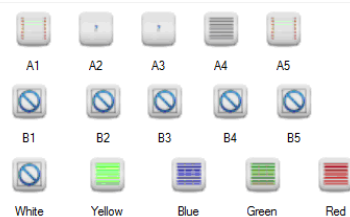
History, visibility, traceability

Exploration and production companies buy OCTG from distributors. Most of the software that distributors use only tracks parts of the business, such as logistics and trucking. Distributors typically track OCTG on Excel spreadsheets and financial software, but using Oil Country OS, they can see their inventory, issue a sales quote, and convert that to a sales order. They can track full orders and partial shipments. They can also purchase, store, and manage inventory at multiple locations, some of which they may not own. Maria Arms explains, "A distributor can sell pipe to a customer, ship all of it, and have the customer send back 10 percent of it. With our solution they can bring it back into the system and track why it was returned. That sounds simple, but before, they had no easy way to trace anything—those are the advantages we

offer: history, visibility, and traceability." The distributor's customers can also log into the system and see their current inventory levels and outstanding orders.

A virtual view of millions of miles of OCTG

Third-party logistics companies use Oil Country OS to manage customer inventory in their storage yards. These companies own the yard, but not the inventory they manage. Both exploration and production companies and distributors store tubular inventory at these yards. Using Yard View, a feature of Oil Country OS, storage yards can see a virtual representation of the physical yard. This way they can easily locate racks where pipe is stored, click on a rack to view exactly what's on it, and even drag and drop pipe to a different rack to keep inventory accurate in real time.



Yard View representation

Yard View integrates with all widely used measuring or tally devices, so yard workers can measure each joint of pipe in an order before it ships out. The devices connect via Bluetooth or USB to a tablet or PC running Oil Country OS to push the data to the system, where yard workers can drag and drop to manage inventory, or create reports that show all ins and outs by joint count and footage. "We wanted to create a system that workers with little technical savvy could learn and use quickly," explains Maria Arms.

A paper problem, a digital solution

The customers with the greatest challenges are the pipe inspection facilities. A faulty pipe can cause severe financial, economic, and environmental impact. Even at the largest inspection facilities, inspectors use paper to document all damages, and reenter the information into a spreadsheet to send to the customer. "Having a digital copy of the

inspection and attaching associated documents can save a company from paying huge fines if there is an issue—not to mention safety," says Maria Arms.

The paper work orders are carted away in boxes to the corporate office for billing. "Think about the delay in invoicing and what happens if you lose a piece of paper worth \$35,000 in billing."

With Oil Country OS, inspectors log everything about drill pipe directly into the system using a tablet or laptop. They can get a digital signoff for the inspection in the field and tap a button to send the bill to accounting. "They can also pull up records and compare one inspection to another, which helps to track wear over time and ensure equipment is retired in time to prevent incidents. All by itself, knowing the cause of the defect and addressing it saves the industry billions of dollars a year," says Maria Arms.

A data pipe running through the cloud

To provide solutions for both enterprise customers and small businesses alike, Arecon Data decided to host Oil Country OS with Microsoft Azure RemoteApp. Arecon was able to test and deploy the pilot rather quickly. With this cloud offering, customers simply download a client app that runs on a PC, laptop, or tablet computer. Then, customers access Oil Country OS as if it was running locally. "In this industry, field workers often have very limited bandwidth. Azure makes it easy just to push data back and forth as needed," says Maria.

Jeff Arms, President and Founder of Arecon Data, adds, "We also did not want to maintain databases at customer sites. Through Azure, we can maintain a smaller staff to manage databases and easily streamline updates and patches to our system, and we can scale things very quickly, which is a real benefit to customers in a volatile industry."