



Trace Minerals Brings Manufacturing In-House with eWorkplace's Process Manufacturing & Quality Management

Also deploys Acumatica ERP, boosts traceability and quality control while saving time and growing dramatically

Overview

For years, Trace Minerals ran its business on legacy Great Plains and several siloed applications. Facing rising costs and errors, the company brought manufacturing in-house and purchased its liquid supplier, which expanded its product line. Trace Minerals relied on spreadsheets and paper processes to track the quality of its ingredients and products it sells, but found that the manual process hampered manufacturing. Trace Minerals deployed Acumatica Manufacturing ERP with eWorkplace Apps' Quality Management System and its Process Manufacturing application, dramatically increasing visibility and traceability while eliminating paper processes and streamlining operations.

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Kelly Jones

Director of Regulatory & Quality,
Trace Minerals

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Products

eWorkplace Apps Quality Management System and Process Manufacturing, with Acumatica Manufacturing Edition's MRP, Financial Management, Order Management, Inventory Control, Acumatica Advanced Financials with Distribution, Fixed Assets, Customer Self-Service Portal, with ShipHawk and Salesforce.

MANUFACTURING	Dietary supplement product manufacturer, including vitamins, minerals, gummies, and liquids supplements
HEADQUARTERS	West Haven, Utah
EMPLOYEES	150

Key Results

- Implemented end-to-end, flexible ERP platform seamlessly connecting Process Manufacturing and QMS system
- Improved business processes company-wide, streamlining operations
- Automated manual, paper-based workflows, saving time and money
- Gained eWorkplace Apps' Process Manufacturing management system supporting powder and liquid formulas while gaining density considerations, and allows users to use volume and weight unit of measures
- Added eWorkplace App's Quality Management System that quarantines and tests items throughout receiving, production, and shipping process to ensure tighter control of production; includes Certificates of Analysis
- Gained formula and process bill of materials, saving time and expenses, and MRP for better forecasting
- Gained inventory management, increasing accuracy while better controlling costs
- Decreased manufacturing errors with better data in an end-to-end platform
- Attained lot and serialized component and finished goods traceability with detailed manufacturing costs

Challenges

Trace Minerals holds a license to harvest minerals from Utah's Great Salt Lake and is dedicated to researching data, harvesting minerals, promoting awareness, and formulating best-in-class products to help re-mineralize the world.

The West Haven, Utah firm makes more than 160 formulated products including its ConcenTrace® Trace Mineral Drops, the number one selling trace mineral in the natural products industry. Trace Minerals is known for its mineral, magnesium, and performance nutrition products that it sells as liquids, capsules, and gummies. Its Mega Mag liquid magnesium supplement has 34% market share and it holds 50% of the liquid magnesium market share.

Two long-term employees bought the company in 1999, and along with a recent private investment placement, are taking the company to new heights.

Trace Minerals sells its products domestically through health food stores, online through Amazon and other sites, and through distributors internationally. They sell directly to consumers through a branded online store. It has been GMP certified since 2004 and is a registered member of the Global Retailer & Manufacturer Alliance.

Ended Contract Manufacturing

For most of its history, Trace Minerals contracted its manufacturing to others and operated more like a distributor, says Kelly Jones, who currently serves as director of regulatory and quality.

Facing rising costs and lost orders, company executives decided to bring manufacturing in house, a move that led them to build a manufacturing facility two years ago, and buy its California-based liquid dietary manufacturing supplier, which it did in 2019.

The shift in business strategy necessitated a digital transformation as well.

Siloed Systems Hampered Growth

For years, Trace Minerals used Microsoft Great Plains as its financial system, a standalone credit card system, and a separate, standalone warehouse management solution.

"One of the larger challenges we had with Great Plains was the high cost of users," says Jones, a 20-year Trace Minerals employee who served in every department except accounting and sales. One of his many projects was finding a new ERP and implementing a quality management system.

"GP was really expensive per user and when you are a growing company, more people need to have access," he says, adding that during his tenure, employment grew from 40 people to more than 150.

“We also didn’t feel like we had the right third-party tools to grow,” Jones says. “We outgrew our WMS, which had become more burdensome than helpful.”

Trace Minerals also had many customizations and several custom software applications, including one that was critical to dealing with GNC, one of its largest retail customers. None of the applications were connected.

Begins Process Manufacturing

“Some of our contract manufacturers dropped our products while others kept raising prices,” Jones says. “When we found out how much it actually cost to make various products, we decided there was no reason to leave powder mixing to someone else. It didn’t make sense to shop it out. Buying the liquid manufacturing company gave us much more control over making our products.”

The liquid manufacturer, however, used a legacy financial system, which was difficult to use, Jones says. “That and our entry into manufacturing was what really pushed us to get a process manufacturing solution.”

Previously, Trace assembled products, packaged them, and shipped them.

Making its own supplements, however, required the company to implement new processes and capabilities. First, they needed to create product formulas. To make each product, employees mix trace amounts of ingredients, verifies the ingredients, packages and properly labels them before shipping them. They manually documented each step, including testing, using paper and spreadsheets.

“We were extremely heavy users of Excel spreadsheets, which, with batch paperwork, became very cumbersome,” Jones says. “We needed something more than discrete manufacturing that included a process manufacturing solution for what we did.”

Every product made had a folder with the necessary paperwork, he explains. To create and fulfill an order, someone had to print copies from the folder, print off a batch record of ingredients and the formula, and then walk the information to the manufacturing floor. After the product was made, the production manager walked back to the office to give the necessary list of ingredients and amounts used, dates made, and a batch number, information that then had to be manually typed into a production spreadsheet.

Additional paperwork was added to the folder when the product was tested, including the results and whether the packaging was sealed correctly. Jones wasted countless hours shuttling paperwork back and forth since he was in charge of the data.

Without an inventory management system, Trace Minerals often ran out of certain items, and it didn’t have a good forecasting tool, so managers often guessed based on gut feelings.

Deployed Acumatica Cloud ERP

The first step of its digital transformation was deploying Acumatica Manufacturing Edition that best served discrete manufacturers. While discrete manufacturers need to track parts and resources, process manufacturers – like pharmaceutical, food and beverage makers - need additional functionality that allows them to account for all of their ingredients, formulas, batches and resulting end products, and manage additional complexities.

Trace also needed a quality control management program that could streamline product testing, provide certificates of analysis, and additional data to comply with government regulations for supplements.

“We needed a system to handle trace ingredient amounts and smaller portions when mixing batches,” Jones says. “We also needed to make quality checks, validate whether batches passed or failed tests, and make sure formulas were correct, products were sealed properly, and document product mixtures from start to finish so the right products are made with right lot numbers from the right raw materials.”

While he wrote a few macros that somewhat automated the data input, he still spent a lot of time adding and filling in spreadsheets. “We also needed a better database for testing,” he says.

Solution

Acumatica Seamlessly Connects to Third-Party Apps

Acumatica's agile, modern, and flexible xRP platform was designed to seamlessly connect and integrate with other applications, allowing third-party companies to create custom processes, procedures, and applications to meet a company's unique business requirements.

Recognizing an opportunity to better serve companies like Trace Minerals, Acumatica and eWorkplace Apps created a relationship in which eWorkplace Apps was able to extend Acumatica's features to support the manufacturing and quality needs of a process manufacturing using their industry knowledge and intellectual property it gathered over the last 30 years in a related entity called BatchMaster.

Trace deployed the Quality Management Suite (QMS) for Acumatica by eWorkplace Apps at the beginning of 2022. The QMS is natively built within and is an integral part of Acumatica's platform and its Manufacturing and Distribution Editions.



eWorkplace Apps' QMS and Process Manufacturing

Using the Acumatica toolset and database, the QMS tightly integrates to critical, companywide business processes and Acumatica ERP's financial management, order management, purchasing, production, inventory, warehouse management, shipping, and other core applications.

The eWorkplace App's solution provides end-to-end Quality Control testing on receiving raw materials, production (in-process and at completion), shipping, kitting, ad-hoc and RMA QC. It allows customers to execute inspection plans, checklists, and QC tests against products, people, and equipment.

It also generates and provides certificate of analysis (COA) and production deviation documents and reports and tracks non-conformances. The Quality Management Suite also manages corrective and preventative action processes while maintaining a complete audit trail.

In October, 2022, Trace Minerals deployed eWorkplace App's Process Manufacturing Suite, which manages the manufacturing complexities inherent to the products, processes, variables of process and formula-based manufacturing industries.

Benefits

Seamless Integration from Order to Quality Control to Ship

The two eWorkplace Apps' solutions built within Acumatica's core framework and therefore use the same friendly user interface. Data flows throughout the entire system through automated tasks and into customized dashboards, which streamlined operations and saved countless hours, Jones says.

Executives and employees can see transactions from end to end throughout multiple operational departments, something they couldn't do with Microsoft Great Plains. Now, everyone can view a transaction from when an order is placed to when the company receives payment for it.

With Acumatica's unlimited user pricing, Trace Minerals has an affordable system that anyone who needs to has access to without driving up the software's operating costs, Jones says. People no longer have to share access or wait for others to accomplish tasks and executives don't have to worry about rising per-user licensing costs when employment grows.

Real-Time Visibility Streamlines Operations

Critical data is entered into the system and travels automatically throughout the manufacturing, testing, auditing, shipping and financial processes and is easily retrieved. Having information stored digitally has made data available in real-time, saving hours and reducing the company's printing costs and employee time delivering paper to the manufacturing floor. No one hunts through paper folders or file cabinets to find test results, batch formulas or what's in inventory.

“Now I can look up what the crew just completed on a job that's on a pallet in the warehouse because I see a receipt of it,” says Jones explaining that he simply views a dashboard rather than having to walk back and forth to the shop floor. “You don't have that power when using spreadsheets.”

With eWorkplace's Process Management solution integrated with Acumatica, Trace Minerals managers can see what was ordered, where in the manufacturing process a batch is, its status, what inventory item it might be waiting for, and what might be completed in a day, information that can be shared with the testing department so that group knows what is coming or knows what might need to go to outside testing.

“We also get notified if we don't have enough lids, when a batch is set to return from outside testing, and we know who did what when,” Jones says. Previously, someone had to physically check inventory levels of an ingredient or item like number of lids against a printed list of inventory items, walking back and forth from the office to warehouse or the manufacturing floor.

“We can now better track a product as it goes through the entire process,” Jones says. “Building formulas and handling our BOM is a lot better than doing it with Excel. Now we do it once and it's right. We're not going to accidentally hit a button and learn a formula is off.”

Improved Quality Control and Testing

Previously, items weren't picked from inventory but adjusted, he says. “We couldn't trust the information; we still had to go and look to verify. Now, we have much more inventory control and can trust the information is accurate. When you are 250 to 400 jobs deep, you have to have accurate inventory or you might allocate resources to one job and not know you need to get more for the next one.”

The eWorkplace Apps' Quality Management solution helps Trace Minerals better comply with federal regulations including part 111 for dietary supplements, 117 for food safety and 121 for food defense, Jones says.

“We've really improved our release procedures,” he says. “Everything that comes to the dock goes on hold until it goes through all the steps it needs - through ingredients, finished products, every bottle box or lid. We better manage those checks, making sure we put in the results from reviewing in-house or outside testing so releases don't happen prematurely”

Required mock audits are completed swiftly because paperwork is easy to find and instantly available.

Trace Minerals now has a better testing database and professional looking Certificate of Analysis' to provide customers, Jones adds. “This has also been great for managing all of the calibration required for many of our tools and equipment.”

Continued Growth: Sales up 50 percent in 2023

The fact that eWorkplace's applications are built within the Acumatica framework has allowed Trace Minerals to grow substantially. Revenues have grown 6-fold in the past several years and executives project double digit annual growth for the next several years, Jones says. The company is no longer limited by a legacy system.

"This year, we're already up 50 percent over last year at this time and I don't see that slowing down," Jones says.

As the company continues to refine its processes manufacturing and dive deeper into all the functionality that Acumatica and eWorkplace offer, the company expects to improve margins as it begins tracking costs per unit, labor cost per job, and other KPIs.

And the eWorkplace Apps team will continue to help them improve operations. "I highly recommend them." Jones says. "I really like the company and the people. We continue to have weekly support meetings and I look forward to learning more about their hosting solution, which could help us comply with continuous validation for any changes to our business or upgrades."

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