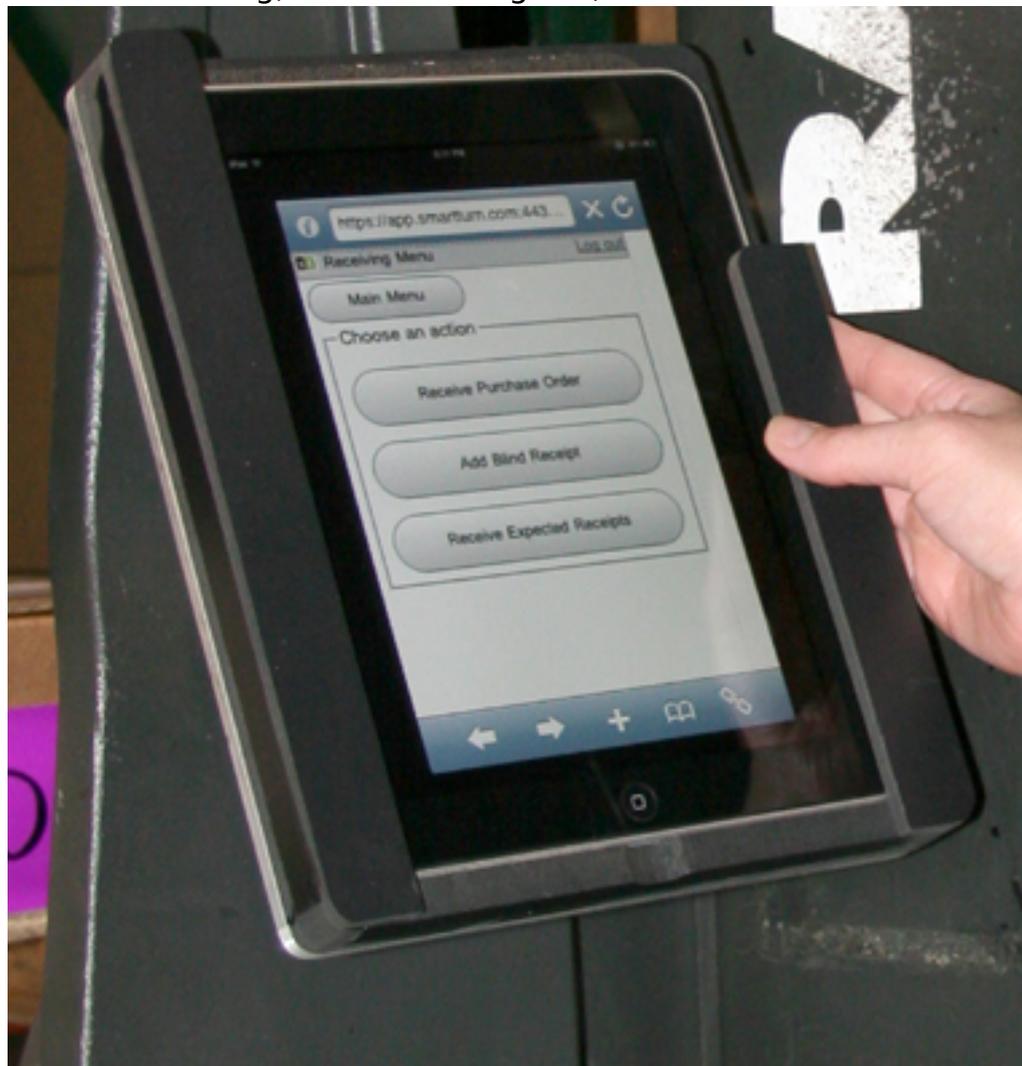


The Apple In The Supply Chain

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In its search for the latest technology to aid a growing supply chain operation, Markley Enterprises, a small manufacturer of point-of-purchase displays, found the solution in Apple's iPad.

As technology continuously changes, your supply chain and its processes should be revolving continuously, too. That's why Tim Markley, President of Markley Enterprises, is constantly searching for innovative ways to improve his supply chain operations. And the latest technology solution the small manufacturer of point-of-purchase and trade show displays has come up with? Utilizing Apple's iPad in its supply chain operations.

"We're kind of a strange example of manufacturing companies because we have been Macintosh-based since the beginning," said Markley. "We do so much work in the graphics area, that using Macs just made sense for us. Most people use Microsoft-based PCs for business purposes and the Mac has been difficult to deal with -- especially for manufacturing -- but we always made it work for us."

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About 12 years ago, Markley added distribution services for customers and adopted his Apple Macs to handle both the distribution and manufacturing operations with his own proprietary system. But as technology changed, Markley's customers wanted more visibility to inventory and real-time information -- prompting Markley to look for alternative solutions.

Markley's search led to RedPrairie's warehouse management system, an internet or cloud-based operation.

For small to medium-sized manufacturers, cloud-based computing offers the convenience of the web as well as less of the maintenance and responsibilities of handling your own IT operations.

"With a cloud-based system, you immediately take the platform out of the equation," said Markley, "because as long as you can access the internet with a browser, it's basically the same as when working on a PC or a Mac."

And with a mobile application for wireless warehouses like Markley's, employees have the ability to be on the shop floor or the fork lift and can still take orders and process packages.

And that's where the Apple iPad plays a huge role.

Markley first started using Windows Mobile Devices to access their systems from the shop floor, but found its stylus cumbersome to use. When Apple's iTouch came out, the touch-screen functionality eliminated the use of a stylus, improving efficiency, but the screen size made viewing difficult.

Once the iPad came out, that solved the screen size issue. It also had a faster processor and the touch interface was much quicker, easier and more intuitive.

"One of the problems we had using computers on the warehouse floor, is if they're not fast, people don't want to use it and the iPad works really fast," says Markley.

Markley Enterprises adapted the iPad to use on forklifts. Workers feed and put away and update inventory in real time. Before that capability, employees had to walk back and forth to a computer terminal to input or retrieve information. Using the iPad with the wireless system reduced Markley Enterprises' time spent tracking inventory by 30 percent.

"You don't realize how much time it takes until you isolate it and everyone was surprised how much time was being wasted simply walking 30 feet to get an answer and walking 30 feet back," shares Markley.

Jim Burleigh, head of RedPrairie's On-Demand WMS Group, finds Markley Enterprises' use of the iPad both innovative and cost-effective.

"Rugged, mobile computers for manufacturing environments have been around for a long time, but they can be pricey. Often there's places where these aren't

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required and an iPad or netbook works beautifully for a lot these situations since they're built purposely for wi-fi capability -- and they're extremely cost-effective."

In fact, an iPad or netbook can cost five times less than their more rugged counterparts, but drop one from four feet and you'll likely need a replacement.

Markley found a solution to the iPad's fragility by fixing them directly to the forklifts where they're used, eliminating the potential to drop and break them. He also has more innovative solutions planned to improve its operations using the iPad with a cloud-based system that captures labor time on the production floor.

With easy access to its operations via the internet, Markley says even customers appreciate the added visibility and immediate information they receive regarding their orders.

"When orders are placed, those orders immediately integrate with the warehouse management solution so corporate customers can go online and view the inventory and track their order through the process," he says.

Markley notes the added visibility has greatly improved customer service as well. He says if customers have questions on the status of an order, they can track the order and delivery online and get all their answers immediately.

Security Concerns

Using a cloud-based server provider means trusting your data to someone else and Markley admits he was unsure how secure his information would be on a cloud-based system, but has since become a firm believer in its security.

"I understand some manufacturers would be skeptical knowing that someone else has access to their data. But if you're diligent and check out who you're giving your data to, as well as the process involved in returning that data if you choose to leave them, you'll find your data is typically a lot more secure," he says.

Burleigh offers an analogy to the security concerns: think of your data as money in a bank.

"In a multi-tenant cloud computing system, customers' data is all mixed in the same system. That sounds like it might be worrisome, but I always ask people, 'if you go to the bank, is your money separate from my money? Does the bank have a different vault for each one of us?' At a bank, your money is turned into a record mixed in a database with everyone else's records. And that's been going on for eons and no one has a problem with that. The same system in banking has been applied in the IT world -- I would say your data is safer in a cloud-based system than it is in the average small-to-medium business out there. We have so many levels of security, redundancy and firewall protection and very few small-to-medium businesses can afford to get that kind of level of security," he says.

"In our case, data is a lot more secure now than it was in-house. We're not the

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greatest in keeping everything backed up, so using a cloud-based service provider has really improved our security situation,” said Markley.

Burleigh says when searching for a cloud vendor, it’s important to look at the overall viability of the vendor.

“The cloud-route has a lot of smaller, younger vendors with many of them being acquired by others, but they can also not get enough money to keep themselves afloat, so I’d be concerned about the viability of the vendor,” he says.

Manufacturers should also look for a vendor with a significant number of customers. “That means that vendor has seen enough different models that software is capable of accommodating a lot of different things,” Burleigh says.

From another technology model standpoint, Burleigh says there are cost advantages to finding a multi-tenant system rather than a single-tenant model. He says a lot of customers go the single-tenant route, but that means an individual server per client -- and your costs will be higher.

“A multi-tenant model means you can share as a vendor the costs of everything from security to backups over a broad reach of customers. In the long run, that keeps prices down,” Burleigh notes.

For small-to-medium-sized manufacturers looking to improve their supply chains, Burleigh points out that the technology is out there and it's not too expensive or cost-prohibitive anymore.

“Manufacturers ought to demand that their suppliers and vendors be technology-enabled as well. Manufacturers spend a lot of time and money gathering information about their supply chain, and now there is cost-effective and easy ways to share that information. You no longer have to deal with faxes and emails from your suppliers or vendors to get everyone on the same page as to what's going on in the supply chain,” he says.

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