

FROM THE EDITORS OF **CropLife**

PRECISION Ag[®]

PROFESSIONAL

SPECIAL REPORT

Enterprise Management Systems: Making the Big Change

A functional and stable software system can allow a retail operation to run at maximum efficiency, build customer loyalty and help the business grow. But when a software system falls short or is a bad match for an organization, the results can be disastrous, and require a complete overhaul.

The task of making a change is daunting, but the rewards of getting it right are substantial. In this *PrecisionAg[®] Professional Special Report* we share tips and success stories from service providers who went through the process and came out the other side better for the experience.

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When It's Time To Switch Software

Finding and implementing better systems can make a huge difference in profitability and customer service.

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NO ONE in their right mind wants to change software. That's the opinion of Tim Ferrell, manager of Marshall County Co-op, Benton, KY — and who would disagree? We've all been in the information age long enough to recognize that software, hardware, and the like are deeply complex animals. But as demands grow both inside and outside a retailer's business, there comes a time to look for better solutions if an older system isn't cutting it.

A survey of retailers conducted by our sister publication *CropLife*® magazine revealed a host of reasons why they wanted to switch software. Current systems had become obsolete or the scalability wasn't there for new volumes of outlets, customers and data. Sometimes the programs couldn't handle the diversity of a market, as was the case for Ben Carlisle, Ag Technology Manager at GreenPoint Ag, Memphis, TN. His company's geography covers multiple states along the Mississippi River

and includes crops such as corn, soybeans, cotton, wheat, potatoes, sugar cane, and rice.

Another problem was moving data, getting it through portals to where it was to be used. "You can only stand waiting with an applicator in the field for so long to make sure he's got what he needs," describes Troy Walker, Agronomy Field Sales & Precision Ag Manager with

MKC, Moundridge, KS. Indeed, in many cases the data needed to be highly mobile for use on a laptop, tablet, or smartphone.

Other issues centered around a lack of software updates and innovation from suppliers — or updates that didn't work for a particular retailer. In addition, companies did not provide the tech support or training needed. And one big problem: Varied components — even some among the same vendor — wouldn't integrate or talk with each other efficiently or at all.



Tim Ferrell
Marshall County Coop



Ben Carlisle
GreenPoint Ag

GETTING STARTED

Analyzing how to tackle these problems and find new software requires a clear process. A first step is to decide who exactly will be choosing the systems.

At GreenPoint Ag, Carlisle says a whole bunch of "chiefs" got to-

gether: the CEO, the operations manager, the three region managers, the managers at the top six performing locations, facility managers doing precision agriculture, and some WinField field staff. The group did a SWOT — strengths, weaknesses, opportunities, threats — analysis and developed a good direction going forward for software analysis.

MKC did surveys with its staff, precision staff, field sales, even with its growers as to what they were looking for as the co-op made this change.

Lynda Pemberton, Vice President of Customer Service with SSI, suggests creating two lists. "In the first, write down all the capabilities you have today that you deem necessary going forward. In the second, list what you hope to gain from moving to a new software platform," she says.

Indeed, too many times retailers will evaluate vendors based on the ease of use, functionality, etc., with little to no consideration into how it fits into a larger, long-term digital strategy, cautions Joe Akin, Chief Operating Officer at SST Software.

Our software and retailer contacts offered a list of qualities to look for in a vendor:

Proven results. This is where dealers will have to do their homework. "Basically, look as deep as you can before selecting a software partner," says Greg Duhachek, President of AgWorks, LLC.

He believes longevity is a factor here.

"For me, the 'magic number' is probably around 10 years in business. If a software company hasn't been around that long, you can't be sure of their financial situation (will they be around in another 10 years) or operational prowess (can the company deal with 100 customers and keep them all happy).

Ernie Chappell, President and Founder of EFC Systems and a nearly 30-year veteran of the software business, would also offer a "buyer beware" here. He's found there are newcomers to the market with a nice marketing pitch and good presentation, but they're still building their solution.

If a company is still new to the space, perhaps even with a prototype product, identify 10 of your innovator growers who might be willing to try new things, says Teddy Bekele, Vice President for IT with WinField. "If it doesn't work, they have a lot of patience and can be very forgiving."

Knowledge of agriculture. "What we had learned with our previous vendor — and what we were seeing from a lot of the new Silicon Valley-backed vendors — is that too often the tools fell short because the people behind them didn't understand and account for the complexity and variability of agriculture and often struggled to comprehend what our people and our customers were needing," describes Tracy Soper, IT Manager at Harvest Land Co-op, Richmond, IN.



Natasha Lilly
The Equity

Scalability. Also look for a partner that can scale to the level you need. Some companies may not be able to handle more than 10 locations — or if their user count gets above 25, they implode, says EFC's Chappell.

"With all the consolidation in the market, what used to be two 20-location co-ops can merge to form 60 and then go on to add another 30. Within two years they'll be 150," he says. "Software needs for a billion dollar company are different than for a four-location, \$80 million

company. You have to pick software that has the horsepower to do what you want. Don't buy a minivan if you've got nine kids; you're going to need a small bus."

A major consideration for The Equity, Effingham, IL, was that a software vendor be able to handle organizing data across many locations. "It was very important to us that a customer could walk into any location and be met with real time data, balances, and other customer needs," says Natasha Lilly, Information Services Director.

Technical support. Find a company that will be available for problems. For instance, Marshall County Co-op, whose customers are primarily hobby and lifestyle farms in western Kentucky, is open seven days a week — and every software provider the co-op brought on over the years swore they had seven-day support. Only one, Merchant Ag from EFC Systems was able to actually help on a weekend. The others had answering services or overseas call centers that were difficult to communicate with. And

one called back on the Tuesday after a Saturday crisis.

Comprehensive vs. best in breed. Decision makers may be divided about whether to go with best in breed — finding the best programs from different companies in individual business segments (seed, agronomy, grain, financials, etc.) — or to get a single, comprehensive enterprise resource planning (ERP) solution that handles all these areas.

Leadership at Harvest Land Co-op chose to look for tighter integration over best in breed, in part based on lessons from their last system conversion.

"We felt that the efficiencies presented by a more complete integrated solution outweighed the potential feature gains of going with best in breed in each business area and trying to interface them together," says Soper.

Openness. Find out how receptive a software provider is to customers' suggestions and needs in developing new functionality. Also, see if the software integrates with other firms' offerings that

Harnessing A Team To Build Your Own Software

WHAT'S a powerhouse retail network to do when it can't find a software system to meet incredibly diverse needs? Build its own. That's what Wilbur-Ellis Co. did when it debuted AgVerdict in 2014.

The company is spread across nearly two-thirds of the U.S. and includes 160 retail branches. "Finding a single software solution that could encompass all our needs proved impossible," says Dave Uberuaga, AgVerdict Product Manager. In fact, he says his team even tried to combine two different packages, but it didn't work.

Indeed, it's very difficult to create a one-size-fits-all approach when field practices vary from a quarter acre of vegetables to a thousand acres of dryland wheat. But the efforts of creative developers and field staff working together made a tool in AgVerdict that bridges the cropping systems, regional regulatory requirements and the latest technology.

In the beginning, AgVerdict's development team numbered more than 100 people. Today, the software is supported by 40 to 45 employees and 21 field staff. They include a "Cloud Care Team" that constantly monitors for security and privacy issues.

Among the software's features: Collecting and using field level data from ground-based sensors, yield monitors, and imagery, AgVerdict writes site-specific nutrient prescriptions and crop protection recommendations — all that fulfill compliance needs. Available are tools to improve communication between the agronomist and the grower. And the software supports a host of precision ag practices.

A key demand for today's software is mobility. AgVerdict is optimized for mobile so growers and agronomists can easily access it from IOS devices. It's hosted on Amazon Web Services — a platform that Uberuaga says is a very robust and reliable.

Data will be key in future product advances. "There's a push in the industry to make 'easy buttons.' Our goal is to help agronomists do the hard tasks by creating a tool that automates features using data and new technology," says Uberuaga.

may need to be added at a later time.

“Be sure to get answers to questions about data accessibility, ownership, and control,” says Mike Santostefano, Vice President of Marketing & Business Development at AgIntegrated, Inc.

DIGGING DEEP

Investigating the abilities and integrity of a prospective software supplier will take time.

Retailers should check references and visit customers of contenders, says EFC’s Chappell. Also spend time in the vendor’s offices. “We invite people to please bring a team to my office and meet as many of my people as possible. That’s easy due diligence. That’s not the software provider’s job, that’s the buying company’s job,” he emphasizes.

Harvest Land’s Soper says his team leveraged their relationships within their cooperative system to get feedback from peers on select vendors that they had

narrowed the potential supplier list down to. He found being able to get honest feedback — that isn’t guided by the software companies — from current users of a system is invaluable and offers a much deeper picture of what buyers are likely to experience.

“Based on all that feedback, we brought in SSI and ran them through very rigorous demonstrations with each of our business lines based on scripts that we gave them to ensure they were talking about the things relevant to our business,” he says. “This is a great way to avoid some of the smoke and mirrors that software companies are capable of in sandbox demonstrations and, in our case, allowed SSI to show how comfortable/knowledgeable they were of the Agronomy retailer/cooperative business model and the confidence they had in



Mike Santostefano
AgIntegrated

their solutions.”

MKC went through a very formal request for proposal process for a number of software vendors, asking them to answer preliminary questions about their offerings. Then the co-op did in-person demonstrations with three finalist companies.

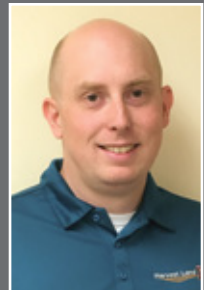
“It took a lot of time, four to six months for us, to get all that decided. There are a lot of players, and any time you’ve got that many people involved, it adds complexity and time. But in the end all the work helped us make a really good decision that works for all those involved,” says Walker.

Retailers will not only need to dig deep in researching software suppliers but also in financing the change-over.

At SSI, Pemberton says her team tries to identify as many potential expenses as possible, including training, professional expenses and data imports.

“How well you handle internal communication and training along the way will have a significant impact on how well you manage the natural fear and resistance to change amongst employees.”

— TRACY SOPER, HARVEST LAND CO-OP



Before finding EFC Systems, Marshall County Co-op's Ferrell ran into a long list of extra costs during his multiple software switches: all new hardware (in most cases, offices never seemed to have what was needed by the new software), training fees, and data conversion fees. He also had to pay for printers, network routers, firewalls, cabling — and an extra \$10,000 per location for miscellaneous expenses. Plus, the co-op saw a loss of productivity for at least six months after most changeovers.

IMPLEMENTATION REALITIES

Dealerships need to be dead-level honest with themselves about how long a new software launch can take. “Implementation will almost always take longer than you and the vendor think it will,” says Harvest Land's Soper.

Chappell gives examples of timelines from his experience. He says an ERP im-

plementation at a one-location business with 10 users can be done in 60 days. With 40 locations, the work would run eight months. If there are 60 locations and 400 users to bring up to speed, that's probably a 9-month or 12-month project. And with a 1,000-user client, implementation took 2½ years.

Overall, AgWorks' Duhachek would say retailers should allow their staff two full seasons to acclimate fully to a new system. And they “simply must” invest in on-going refresher training courses with regularity within the first two years.

“Accept that things will go rather poorly to start (at least in terms of what you expected) but demand that improvements be made every day,” he adds. “If you have found the right software partner, they will be able to guide you through these rough patches and provide training and follow-up to those folks

that are struggling to catch on. That's so important to have a long-term, proven software partner that has been through it many, many times.”

At GreenPoint Ag, Carlisle says that after two years, the change-over he led — to FieldAlytics and the R7 Tool — is still a work in progress, but has provided some great benefits to the company.

Be prepared for lots of questions from customers and mixed reactions.

“There were little things that users and customers liked in the beginning, but with any change there was resistance and grumbings,” says The Equity's Lilly. “Over time, they have come to love it. They love what it can bring to the table. The days of splitting things out on paper and generating spreadsheets by field are over. Customers like seeing how fields are split on invoices and statements.

“Field history is a huge area for agron-

Handy Software, Hardware For The Field

MORE than two decades ago, Iowa grower Doug Applegate wished for a “little portable chemical blending system” that could easily travel to fields — and software that would simplify batch calculations. Seven years ago he began developing his own unit, and with the aid of his ag engineer sons Brent and Luke, has now launched Praxidyn, a company to market it as well as an app to run the system.

Mixmate, designed for both growers and retailers, can simply be loaded onto a tender truck for a job. It can run by one staff person (changing out jugs, mini-bulks, and water) and any Android device.

The Mixmate app communicates with an operation's office via its own cloud-based network called Intersect. It can calculate amounts of needed blend components (plus factor in important in-field variables such as weed type, weed size, and wind speed), then direct the user for the mixing process.

Applegate is currently in talks with several industry software companies to allow Mixmate to interface with their retail management systems. He will be working on the API connections through the summer and by fall should have some of those in place.

“This is really going to streamline mixing operations because if retailers can send work orders from those systems into ours, then all the operators have to do is the mixing,” he explains. And Mixmate's Android platform is great for users. Software updates can be pushed up through the Google Play Store; all a customer has to do is accept them.

In May, Applegate set up a system for a large Kansas grower who is looking to tailor chemical applications so they can be optimized in the field. He will export any mixing data from Mixmate — and any field application data — to Granular where it can be merged for an accurate picture of spray events.

omy salesmen in our business. Quickly generating reports or visibility on what the history of a field is by each crop season allows them the insight and arms them with the right information for the conversation of the current crop season," she says.

Staff-wise our experts said the move to a new system could go a couple of ways.

WinField's Bekele believes there is a need for more tech people when software is added. "A lot of organizations don't recognize that," he says. "They think existing agronomists are going to get it done, but those employees already have tons of things going on. They don't have the patience and the bandwidth to take care of some of the technology demands.

"The job of your sales agronomist is just to go out and talk about the benefits of what precision programs will do and really help the farmer manage the crop — vs. trying to deal with the technology."

Ideally, having one or more additional team members would be beneficial, depending on how many customers a retailer has, he feels. They could deal with set-up type tasks, such as drawing field boundaries as well as handle customers' questions.

Chappell says because of efficiency gained with some types of software, a retailer can go from five people to two in an accounts payable department — a situation he saw with a billion dollar client.

In general, he's found that system changes usually involve a staff reduction or repurposing. Employees are getting more done, freeing up resources. There's more electronic trading of information between companies, less paper-based — including more electronic interaction with grower customers.

SPOTLIGHTING PRECISION

The right software can help maintain

and grow a strong precision presence with customers. Precision tasks could include mapping, scouting, sampling, work orders, fertility, planning, record keeping, with integration to chemical compliance and ERP, suggests Chappell with EFC.

AgWorks' Duhachek says management of data is what will make the difference going forward. "Statistically, variable rate/precision has stalled out at about 30% to 40% adoption and retailers are searching for the reason why," he says. "We believe the problem is that retailers are trying to answer questions about how effective a particular application may or may not have been and are realizing this is not a "precision issue" — it's a data issue.

Using software to tracking both straight-rate and variable rate/precision application details is incredibly valuable if you're looking for answers, says Duhachek. "This can help retailers benchmark their own sales

programs as well as allow for their growers to be informed about what's working and what is not."

MKC's Walker notes that precision has historically been one guy with a piece of software on his local laptop. Now it's grown up to 15 guys who actually live in their truck — and sometimes the Agronomist is working with the same grower the salesman is. "You need this shared data, cloud-based," he says.

Going to new software presents not only a learning curve for precision employees, but also for customers, points out GreenPoint Ag's Carlisle. When evaluating products, the company's leadership team wanted something customers could use and access "because we encourage them to see and touch their data. They want you to do it, but they want to see it," he says.

He admits one of the biggest challenges was to find a system that is expert enough to handle data analysis but also simple enough to train employees pretty easily on.

A software change-over is actually a great time to clean up and standardize records. Harvest Land Co-op's Soper suggests that when migrating from a legacy system especially, retailers need to allow time to focus on data quality — and realize that it's likely not in their best interest to move everything.

"If you are moving to a new platform, especially at the enterprise level, then you want to at least come out of it with true master repositories for key data (customers, inventory, farms and fields, fuel tanks, etc.)," he says. "By doing that, you often can find easy efficiency gains. For example, previously we might have drawn the same field boundary in three or four systems where now it's in one place and can be utilized for precision, work order and billing purposes at the same time."

Be careful not to overpromise capabilities, warns AgIntegrated's Santostefano. Instead, be transparent about current

features and develop a feedback loop with the precision department and grower-customers. "Try not to focus on selling the software itself — instead focus on selling the precision program including the process, culture, and results," he says.

Going forward, EFC's Chappell sees two things. One is more integration of software abilities, with multiple ERPs connected to precision, precision connected to financials. For instance, when writing a spray order on a customer's fields, a salesman can access the price of the chemical, if it's in inventory, the label rate, the history of the field, and if it's in compliance.

Second, Chappell predicts tremendous growth in software providers who deliver solutions in the next two to five years. "I think there's a pent-up demand for good, comprehensive solutions ... the market has been wanting it and hasn't been finding it, in both ERP and precision. I think there's going to be a lot of technology placed as the market shakes out." ■