

OPTIMIZE FIELD WORKERS, SERVICE & ASSETS

GOSIGER

FUTURISTIC FIELD SERVICE





GOSIG

serious soluti Gosiger's

VIDEO <u>COLLABOR</u>ATION

September/October 2017

With a video collaboration tool, an equipment dealer has reduced the length of its technology support calls by 50 percent, p.16.

Gosiger's three-pronged business transformation included investment in a field service management system that, through efficiency gains, gives the company the capacity to take on an additional \$2.6 million in service work each year, p.6:

Service

 \square

90

Roger O'Connor, VP of product support, Gosiger

Ce

7erhaul

Intelligently tough.

Get best-in-class reliability and productivity in the harsh conditions you face every day with Dell's Latitude Rugged portfolio. With the most secure and manageable rugged computers available, you can focus on your work.

Learn More at Dell.com/rugged





Editorial Mission Statement For Field Technologies

Covering front-end to back-end enterprise IT integration, *Field Technologies* shows growing organizations how to capture, generate, and retrieve data at all points of work and service. We educate IT decision makers about leading-edge technologies and applications that drive business performance — and revenue — by eliminating boundaries of time, distance, and scale.

September/October 2017

Cover Feature

Gosiger's Field Service Overhaul Gosiger's three-pronged business transformation included investment in a field service management system that, through efficiency gains, gives the company the capacity to take on an additional \$2.6 million in service work each year.

Editor's Notebook

Without A Plan Your Field Service Strategy Will Fail, p. 5.

Peer Perspective

Konica Minolta Healthcare Envisions The Future State Of Field Service, p. 12.

Case Studies

Ziegler CAT Improves Service Through Video Collaboration, p. 16.

Markem-Imaje's Quest For Service Standardization, p. 19.

Field Automation Fuels Growth, p. 22.

FIELD TECHNOLOGIES (ISSN-1096-3553) Vol. 20, No. 5 is published 6 times per year (January/February, March/April, May/June, July/August, September/October, November/ December) by Jameson Publishing, Inc. at Knowledge Park 5340 Fryling Road, Suite 300 Erie, PA 16510. Phone (814) 897-9000, Fax (814) 899-5587. Periodical postage paid at Erie, PA 16510 and additional entry offices. Copyright © 2017 by Peterson Partnership. All rights reserved. Printed in U.S.A. SUBSCRIPTION RATES: For qualified readers in the U.S.: \$0. For nonqualified readers in the U.S. and all other countries: \$197 for one year. POSTMASTER: Send address changes to Field Technologies, Knowledge Park, 5340 Fryling Road, Suite 300, Erie, PA 16510.



Industry Insight

p. 6

Will Apple's ARKit Advance Field Service AR Deployments?, p. 25.

Executive Outlook

Your 9-Point Trade Contractor Field Service Software Checklist, p. 28.

Analyst Outlook

Field Service Automation Meets Marketing Technology, p. 30.

Check Out Our Exclusive Online Content



How To Avoid Field Technician Toxicity

Follow these three tips to avoid toxic technicians that ruin service experiences even when they have the best of intentions.



A Small Company's Perspective On The Role Of Technology In The Field

Pest control company owner joins us to discuss some of the issues particular to smaller businesses, and shares his keys to success.



Are Wearables Worth It For Field Service?

I love my Apple Watch, but is there real business benefit to be had from field service companies adopting wearables?



Editor's Notebook



Publisher/Editor In Chief Sarah Nicastro (814) 897-9000, Ext. 325 sarah.nicastro@fieldtechinfo.com

Managing Editor Angel Clark (814) 897-9000, Ext. 285 angel.clark@jamesonpublishing.com

Editorial Director Dan Schell (814) 897-9000, Ext. 284 dan.schell@jamesonpublishing.com

Production Manager Lynn Netkowicz (814) 897-9000, Ext. 205 lynn.netkowicz@jamesonpublishing.com

Circulation Director Melinda Reed-Fadden (814) 897-9000, Ext. 208 subscriptions@jamesonpublishing.com

Dir. Of Online Development Art Glenn art.glenn@jamesonpublishing.com

Corporate Office Address Knowledge Park 5340 Fryling Road, Suite 300 Erie, PA 16510-4672

Contact Information Corporate Office PH: (814) 897-9000 Sales Department FX: (814) 899-5587 Accounting FX: (814) 899-5587 email: info@jamesonpublishing.com website: www.jamesonpublishing.com

Reprints, Eprints, and NXTprints The YGS Group (800) 290-5460 FieldTechnologies@theYGSgroup.com www.theYGSgroup.com

Manage Subscriptions

Subscription/Äddress Correction/Cancel Web: http://www.fieldtechnologiesonline.com magazine tab Email: subscriptions@jamesonpublishing.com (Reference 16-digi # on mailing label, title of pub, your name, and ZIP code) Phone: (814) 897-9000, ext. 315

For A FREE Subscription: Go To FieldTechnologiesOnline.com

Publications Agreement No. 40722524 c/o AIM, 7289 Torbram Road, Mississauga, ON L4T 1G8



Without A Plan Your Field Service Strategy Will Fail

Sarah Nicastro, Publisher/Editor In Chief, sarah.nicastro@fieldtechinfo.com



When it comes to field service, strategies and plans are both important — but it is imperative to recognize that they are not one and the same. All too often, I see companies get excited about an opportunity that exists and they focus so much on the business case and strategy that the plan gets ignored. Momentum builds around the strategy taking shape, only to lead to disappointment on the project because equal time, effort, and excitement weren't put into developing a plan to bring that strategy to life. Planning isn't as "sexy" as strategy; but it's essential.

Enlist Planning Expertise To Bring Your Vision To Life

In developing the editorial for this issue, I spoke with multiple companies that are doing their due diligence to ensure their visions come to life. On page 6, you'll read how Gosiger tackled this challenge in part by partnering with a consulting firm. Roger O'Connor, VP of product support at Gosiger, says on the topic, "Working with a consultant enabled us to leverage the knowledge of an organization that has experience outside our company and outside of our industry. They helped us to consider what questions to ask. It's easy to make big plans and then write it all down and stick it in a drawer. Working with the consultant, you have a tendency to pull those plans out a little more often and honestly review how much progress you have made versus your original plan."

Tackle Your Project In Manageable Chunks

When you're developing a strategy, you look at the big picture — the end goal. When planning, tackling the project one step at a time makes that end goal seem more attainable, and helps you pick up momentum as you go along. On page 12, you'll read about Konica Minolta Healthcare Americas' vision for delivering the "next phase of service." Kevin Chlopecki, VP of service operations for Konica Minolta, knew that, to attain its big-picture goal, the company would need to take it step by step. He says, "Our 'future-state vision' of delivering the next phase of service really started with a passion (almost an addiction) to be number one in customer satisfaction in our industry. While our vision always existed, my request for investment was in minor, manageable phases," he says.

Planning For Change Is A Major Undertaking

As you'll read on page 19, Markem-Imaje is in the midst of a major standardization effort with its field operations. Jack Rijnenberg, director of global customer service at Markem-Imaje, points out that one of the areas that requires the most planning is change management. "There are no shortcuts in change management. Make sure that you follow the right steps from getting top management engagement to determining how your company will measure performance and aligning proper rewards. Ensure that you take the time to communicate and engage the organization throughout the whole project, and accept that sometimes you need to invest more time in certain change management steps in order to enjoy an acceleration of performance and results afterwards," he says.

These companies are recognizing the need to take the time for the proper planning that will ensure successful execution of their visions. Be sure as you develop your strategy leading in to 2018 that you don't overlook the importance of planning how you'll accomplish those objectives.

Sarah nicastro



by Sarah Nicastro

ike many service companies, 90-yearold machine tool distributor Gosiger has recognized the need to transform its service model and modernize its service operations. The family-owned and operated machine tool distributor and manufacturing solutions provider is headquar-

Gosiger's three-pronged business transformation included investment in a field service management system that, through efficiency gains, gives the company the capacity to take on an additional \$2.6 million in service work each year.

> tered in Dayton, OH, and delivers machine tool solutions — including high-performance machines, engineering, service, support, and parts — in 13 states. The company employs 185 service technicians who install and repair the machine equipment.

> Historically, the company has operated a traditional break-fix service model. In 2014, Gosiger recognized the need to make some changes. While Gosiger recognized the opportunity that existed to transform its business, the company enlisted the help of a consult-

ing company to develop its strategy and plan. "We felt that our service organization was very competent compared to the competitors in our industry. But we feel that our industry, as a whole, lags others in terms of providing world-class customer service. We had all had experiences in our personal lives where we felt we had a superior customer service experience, and we worried that we might not be providing this level of exceptional experience to our customers. So we decided to make some changes, and the idea of working with a consultant that had clients outside of the machine tool industry really appealed to us," says Roger O'Connor, VP of product support at Gosiger.

A Three-Pronged Approach To Business Transformation

Gosiger identified three primary objectives for the consultant to assist with: to migrate its business from strictly break-fix work to more contractual service work (predictive service/ preventative maintenance), to develop KPIs to better track the performance of the service business and enable the measurement of improvements, and to create a technology road map to modernize and automate the service operation. Over the period of a year, Gosiger and Jolt Consulting Group worked together on developing service contracts, creating KPIs, and writing a technology road map.

"With service contracts, our goal is to increase the share of preventative maintenance — or predictive service visits," says O'Connor. The benefit of shifting to preventative maintenance

Roger O'Connor, VP of product support, Gosiger GOSIGER serious solutions

•

Service photos by Tim Schermerhon

50

serio

Feature Article

is twofold — it ultimately provides better service to the customers by reducing failures and downtime, and it also makes service work easier to manage and schedule because it is planned in advance. "This is still a work in progress. The vast majority of our service work, over 90 percent, is done on a break-fix basis. We feel we can provide more value Gosiger to set a benchmark of service, and to be able to measure improvement from that point. "Our problem with KPIs prior to going through the consulting process was that we had dozens of metrics and we'd focus on different ones depending on the 'topic of the day.' Jolt led us through a process where we put all the different metrics that we were



"We felt that our service organization was very competent compared to the competitors in our industry. But we feel that our industry, as a whole, lags others in terms of providing worldclass customer service. We had all had experiences in our personal lives where we felt we had a superior customer service experience, and we worried that we might not be providing this level of exceptional experience to our customers. So we decided to make some changes." savs **Roger O'Connor, VP of product** support at Gosiger.

to our customers by offering service contracts. We've done the work to put the contracts into place and have gotten good feedback from some customers, but this is one of those aspects of our industry that I was referring to above - our industry as a whole just has not yet embraced the concept of covering equipment on a service contract. I'm talking with people every week that have their HVAC, their air compressors, or their fork lifts, etc., covered on a service contract, but it is taking time for them to come around to embracing the idea of service contract for their machine tool. We will continue to work on the value proposition for our customer to make sure that the program is truly a win-win arrangement that aligns our goals with our customers' goals."

The development of KPIs was necessary to enable

using (or that we could even think of using) on a big whiteboard and then we categorized them into different areas. We committed ourselves to getting to no more than five KPIs. This made it hard, but ensured that we really focused on getting them right," says O'Connor.

Finally, Gosiger wanted to invest in more modern technologies to manage its service operation. The company used a system of essentially exchanging Excel files via email, and experienced a number of problems with this method. The creation of a technology road map helped Gosiger to determine exactly which areas of its service operation could benefit from modernization, and the right order in which to tackle these projects. "Jolt came and interviewed a few people from every area that touched our service business. This included our field technicians, our schedulers, our managers, our parts people, and our accounts people that do the billing. This painted a picture for us of where some of the pain points were with our current system. It is not that we didn't know these pain points existed, but Jolt was able to help us better understand the number of people these pain points affected. They were also very helpful in helping us to understand the capabilities of the products that were on the market. This led us to see how an investment in these technologies would lead to real-world results in reducing those pain points," explains O'Connor.

Developing A Technology Road Map

The process of evaluating Gosiger's technology resulted in determining the need for an improved scheduling system, the capability to manage the company's new service contracts, the ability to integrate GPS data, and a better mobile solution. "Our ERP does a great job of managing our warehouse and parts business," says O'Connor, "but its service module was lacking."

While the solution was slightly better than the company's previous method of doing everything through PDFs, the service solution was essentially an email exchange of Excel files that were accessed by the technician on a laptop and then emailed back upon completion. Gosiger's back office would run a program to strip the data from these Excel files to update the system. "The solution worked, just not well enough for a company of our size. You had the issue of Excel files getting lost, a major lack of visibility into the work being conducted in the field, and the laptops weren't working well. Our techs wanted a way to be able to view and complete work orders from their cell phones," says O'Connor.

Gosiger and Jolt worked together to develop criteria for a new field service management solution. "Our service managers and schedulers were keeping whiteboards, because they didn't like the tool that was available to them," says O'Connor. So a more user-friendly scheduling solution was imperative. It was also essential for Gosiger to have a way within the solution to capture data from incoming service calls that didn't result in an immediate job. Gosiger wanted a solution that had a clean method of creating and sending work orders, as well as a mobile interface that would enable technicians to use smartphones.

With a formal RFP document, Gosiger began its

en 🛓 o

New freedom of mobility

HAVIS

Start

MOUNT YOUR COMPUTER REMOTELY

The latest mobile office solution from Havis features a new lightweight, high-resolution touch screen display and optional vehicle-specific dash mounts designed to improve productivity in a mobile office.

Learn more at havis.com/tsd

Feature Article



"We estimate that through the additional work our technicians can handle using the new tool, we can now accommodate \$2.6 million in additional revenue per year."

Roger O'Connor, Gosiger

vendor evaluation. The company narrowed it down to four field service management providers that it carefully evaluated based on the RFP criteria. "We did a thorough evaluation that included not only the capabilities of the solution, but also the cost as well as the financial stability of the software provider," says O'Connor. Ultimately, Gosiger chose to deploy IFS Field Service Management. IFS Field Service Management provided the optimized scheduling and mobile capabilities Gosiger was looking for, and integrated with its ERP solution.

Deployment In Tandem

Gosiger phased deployment of the IFS solution, and started with dual processing — meaning that employees were using the old system and the new IFS system in tandem so they could learn the new system without the risk of errors. "We wanted to run both until we were certain there wouldn't be any major hiccups," says O'Connor. "We did so for about a month before we were comfortable switching over completely."

Gosiger has three different divisions based on product lines, and each had been operating on its own for scheduling and dispatch. The company started the IFS rollout with the one division that would require the least customization and integration, just to be able to get up and running and evaluate the new solution. This was considered phase one of the deployment.

With phase two the deployment of IFS, the remaining divisions were all put onto the new, single system. "This required some integration, because each division had its own complexities," explains O'Connor. "We started with the biggest division first, to get as many techs up and running on the system as quickly as we could, and then tackled the integration of the other two groups."

From a mobile perspective, Gosiger field technicians kept the devices they had (their laptops and smartphones), but gained the ability to use their smartphones with the solution. "We provide company-owned smartphones to our technicians, but we don't mandate what type — the techs can choose between iOS or Android," says O'Connor. The techs can also still use their laptops with the IFS solution as needed or desired.

To train its employees on the new technology, Gosiger again used Jolt's assistance and created a training team with a dedicated project manager. "The training team includes representatives from each function — someone from the parts group, the call center, the field team, etc. The representative for each function that was part of the training group was responsible for creating the documentation for that function. So the scheduling team member created the training documentation for the scheduling role, and so on," explains O'Connor. Some on-site training was done, but much of it was conducted via WebEx.

Fostering Technology Adoption

You can't expect a new technology deployment to be entirely seamless, and this was Gosiger's experience. "It was probably 80/20," says O'Connor. "Eighty percent of it went extremely well, but the other 20 percent required a lot of handholding." He points out that many of the employees were tech savvy and picked up the use of the new solution right away, with no problems. But that can't be expected of everyone, and some others needed far more help. "We tried to have a lead or champion in every office," O'Connor explains. "We picked leads we

Feature Article

knew were very good with the solution, and asked them to help their colleagues locally, just by working in the system with them."

Gosiger also leveraged videos for ongoing training and education. "I picked this idea up from a conference I attended — to encourage employees to create some training videos themselves, just sharing their use of the technology or something they'd learned," says O'Connor. "We incentivized this by offering \$50 gift cards to the 10 best videos published on our YouTube site. This was a way to try to get those champions' faces and stories out there, so that their co-workers could see how they were using and embracing the solution."

With the IFS Field Service Management solution in place, the call center and scheduling roles are very different. The solution enables call center staff to far more easily input incoming calls, so data is more complete. The scheduling tool is more advanced, and schedulers have abandoned their whiteboards in favor of the new tool.

In the field, Gosiger's technicians are leveraging the IFS tool from their smartphones about 90 percent of the time (and using their laptops the other 10 percent). "The use of smartphones in and of itself is more efficient, because there's no time spent firing up the laptop and connecting to Wi-Fi at each location," notes O'Connor. With the streamlined communication the IFS system enables, Gosiger's technicians are able to perform their duties more efficiently. This allows Gosiger the capacity to handle more work. "We estimate that through the additional work our technicians can handle using the new tool, we can now accommodate \$2.6 million in additional revenue per year," says O'Connor.

Going forward, Gosiger will continue to focus on its service contracts effort, as well as continue progressing through its technology road map. O'Connor notes that while working with a consultant was very valuable in Gosiger's transformation, you do want to caution against becoming too hands-off. "You have to keep in perspective that the consultants will never know as much about your business as you do. I knew going into the IFS implementation that one of the challenges was going to be keeping the resources (both internal and external) focused. I asked our consultant to take on a project management role for this implementation. In hindsight, I realize this was a tough ask," explains O'Connor. "I had much more influence over our internal resources than they did. And as the customer with control of the purse strings, I probably had more influence on the external IFS resources as well. Consultants bring a lot of value to the table, but you do have to be cautious in deciding what tasks an outside resource like a consultant will be better equipped to accomplish versus an internal resource."

Statement of Ownership

- 1. Title of Publication: Field Technologies
- 2. Publication Number: 1096-3553
- 3. Date of Filing: 09/29/17
- 4. Frequency of Issue: Bi-monthly
- 5. No. of Issues Published Annually: 6
- 6. Annual Subscription Price: \$197.00/year
- Complete Mailing Address of Known Office of Publication: 5340 Fryling Rd., Suite 300, Erie, PA 16510-4672
- 8. Complete Mailing Address of Headquarters or General Business Offices of Publisher: Same
- Full Names and Complete Mailing Addresses of Publisher, Editor and Managing Editor: Publisher, Sarah Nicastro, 5340 Fryling Rd., Suite 300, Erie, PA 16510-4672; Editor, Sarah Nicastro, same as above; Managing Editor, Angel Clark, same as above.
- Owner(s): Richard J. Peterson, 5340 Fryling Rd., Suite 300, Erie, PA 16510-4672, Terence C. Peterson, same as above.
- Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages or Other Securities: None
- 12. Tax Status (For Completion by nonprofit organizations authorized to mail at special rates): Not Applicable
- 13. Publication Title: Field Technologies
- 14. Issue Date for Circulation Data Below: Sept/Oct 2017
- 15. Extent and Nature of Circulation: Average No. Copies Each Issue during Preceding 12 Months/Actual No. Copies of Single Issue Published Nearest to Filing Date. A. Total Number of Copies: 22,245/11,263 B. Legitimate Paid and/or Requested Distribution: (1) Outside County Paid/Requested Mail Subscriptions stated on PS Form 3541: 21,274/10,360 (2) In-County Paid/Requested Mail Subscriptions stated on PS Form 3541: 0/0 (3) Sales Through Dealers and Carriers, Street Vendors, Counter Sales, and Other Paid or Requested Distribution Outside USPS®: 334/400 (4) Requested Copies Distributed by Other Mail Classes Through the USPS: 2/1 C. Total Paid and/or Requested Circulation: 21,610/10,761 D. Nonrequested Distribution: (1) Outside County Nonrequested Copies Stated on PS Form 3541: 0/0; (2) In-County Nonrequested Copies Stated on PS Form 3541: 0/0 (3) Nonrequested Copies Distributed Through the USPS by Other Classes of Mail: 162/169 (4) Nonrequested Copies Distributed Outside the Mail: 418/275 E. Total Nonrequested Distribution: 580/444 F. Total Distribution: 22,190/11,205 G. Copies not Distributed: 55/58 H. Total: 22,245/11,263 I. Percent Paid and/or Requested Circulation: 97.38%/96.03%.

Konica Minolta Healthcare Envisions The Future State Of Field Service

Publisher/Editor-In-Chief Sarah Nicastro talks one-on-one with Kevin Chlopecki of Konica Minolta Healthcare about the company's plans for service evolution.

onica Minolta, Inc., is a large Japanese technology company headquartered in Tokyo, serving over 150 countries worldwide. Konica Minolta Healthcare Americas, Inc., headquartered in Wayne, NJ, is focused on imaging technologies including digital radiography, ultrasound, healthcare IT, and service solutions. In the Americas, Konica Minolta Healthcare employs 50 direct service technicians and 250 dealer-based technicians.

Kevin Chlopecki is the VP of service operations for Konica Minolta Healthcare Americas. In his role, he is

evin chlopecki



VP of service operations, Konica Minolta Healthcare www.konicaminolta.com

responsible for the company's service vision and execution. What struck me during my interview with Kevin is that Konica Minolta has a particularly well-defined vision of what an innovative healthcare company looks like, and what their next generation of service should be. As Kevin explained to me, one of the company's goals is to transition its service from reactive to prescriptive - which the company is well on its way to accomplishing. Here, Kevin

shares his thoughts on the advancements Konica Minolta has made — and is making — to transform its service.

Field Technologies: You described this "next phase of service" as knowing what will become an issue for the customer — before the customer does. Can you explain what this means for Konica Minolta, and why working toward this future state is so important?

Chlopecki: The state of healthcare service delivery has changed dramatically since devices have become more connected. The Internet of Things (IoT) has already forever altered the state of service delivery. The new technologies and tools we are implementing, for example AeroRemoteTM, help us provide a differentiated level of

service that the industry values while giving us a competitive edge in the market. We have extremely satisfied customers from which the company also benefits as we strive to grow our business. This is why staying ahead of the curve is important.

Field Technologies: What is the value of this prescriptive service model to Konica Minolta's customer base?

Chlopecki: With healthcare providers challenged to do more with less, the biggest economic risks our customers face in diagnostic imaging are asset downtime and user inefficiency. As our customers are looking at their real costs of ownership, and wanting to reduce those costs, they must consider opportunity costs along with maintenance costs. For example, a system that is down for a day waiting for a \$2,500 part may cost our customer more than that in lost revenue. By predicting the problem before it occurs, we can schedule the corrective field service and avoid much of the downtime. Similarly, when a radiologic technologist (the end user) is at 60 percent efficiency, this will reduce the exams performed and billable revenue for our customer. Now our customers have tools to see where their employees may benefit from further training that can help them improve efficiency.

The wonderful thing about a prescriptive service model is that there is value for both the customer and the service provider. Customers of our model benefit from increased uptime and greater efficiency with no additional service contract cost. Of course, the ultimate value is in patient experience — minimized downtime and maximized productivity means shorter wait times and a better patient experience.

Field Technologies: How would you summarize the value of a prescriptive service model to Konica Minolta itself?

Chlopecki: The reciprocal value to Konica Minolta and to our service partners — is the potential to turn something that has been seen as a negative in our industry into a positive. The definition of the word "service" is to "help or assist," but I believe in many industries

Peer Perspective

"service" often carries a negative connotation. It is often associated with an unscheduled outage or a costly problem. At Konica Minolta, we're truly interested in turning that typically negative event into a positive interaction for our customers. We do this by providing these industryleading services while reducing expense. Predictive and prescriptive approaches benefit Konica Minolta (and our customers) by turning expensive emergency events often with more costly travel and overtime, etc. — into scheduled ones where expenses on all sides can be better managed. Finally, this ability to use the embedded IoT communication within our devices enables us to respond to events before they become problems and increase the overall customer satisfaction of a service event.

Field Technologies: Your technicians are enabled with iPads, Konica Minolta uses Astea's field service software, and your imaging equipment is IoTenabled. It sounds simple, but the ability to provide prescriptive service is more in knowing what to do with the data you're collecting than it is in collecting it. How are you determining what data is most important, and what the best use of it is?

Chlopecki: We have done the hard part of collecting valuable data such as system health and usage and user performance through IoT and service event information through Astea's mobile solutions. We are turning that

raw data into useful information for our customers by combining our own experience with direct customer input. Internally, we implemented an echelon-based coding system within Astea that basically consists of codes for failure, root cause, and the repair performed. This coding system is utilized throughout our service enterprise. To ensure the data was being inputted with accuracy, ease, and clarity — real-time use of an iPad device made this more possible. From the aggregate collected data we can develop calculated best prescriptions.

For our external facing services, our customers are more than willing to tell us what will help them. Powerful business intelligence tools create a visualization platform for the collected usage information that users can actually act on. With the infrastructure in place, it becomes easy to change the "dashboards" for our users to further simplify their lives. Our customer feedback directly contributes to these changes.

Field Technologies: Some companies become paralyzed by the amount of data coming in. How do you avoid this and stay focused on your objectives?

Chlopecki: There are many keys to managing the success of data volumes. Some easy-to-use data is better than a plethora of unusable data. We focused on small objectives and accomplishments that we knew our products and infrastructure could deliver. Our goal was to differentiate the customer experience and provide more cost-



IFS SOFTWARE FOR THE SERVICE INDUSTRY

IFS Field Service Management covers the entire, end-to-end service lifecycle. Its IoT capabilities make it the most complete and connected field service software on the market, helping you to maximize operational efficiency, increase revenue, reduce costs and improve customer satisfaction.



Peer Perspective

effective services in an industry where costs typically rise. So we started with data that relates to what our field technicians and customers tell us are their biggest concerns incredibly innovative development team in Japan who wisely began integrating electronic sensors into our products. They opened the door to IoT for us and



result — where we and our customers can now get instant feedback on critical events - no one needed convincing. Buy-in was instantaneous. Since then, we justified the improvement of the service systems, invested in mobile technology, and provided guidance to our development team on the IoT implementation for the Americas markets. At the end of 2016 the projects began to coalesce into sellable sera vice contract. Now we are on a path of constant

and problems. That is the information we deliver. We keep it simple. We can grow from there. Offering something different from our competitors while improving the customer and patient experience was our objective.

Field Technologies: When you initially embarked on this mission to bring the "next phase of service" to Konica Minolta, how did you work to gain buy-in - from the executive team, for the investment, and from the field technicians themselves?

Chlopecki: Our "future state vision" of delivering the "next phase of service" really started with the passion (almost an addiction) of our management team and employees to be number one in customer satisfaction in our industry. We wanted our services to be the primary differentiator in a customer's purchasing decision. While our vision always existed, my request for investment was in minor, manageable phases. Our first investment was in making sure we brought resources into the organization that understood complex data structures. These employees identified all the problems with our internal base data and went to work on correction. Fortunately, we also have an improvement and adding more value for subscribers with the more data we are collecting.

Field Technologies: Based on your experiences with this project so far, what advice can you provide a company that's working to determine how to improve the service they provide?

Chlopecki: My simple advice is to always keep listening and learning. Listen to employees, managers, sales team members, and distribution partners. They are close to our customers. Validate and shape their comments and combine it with direct customer feedback. Don't be afraid to try something different. Then use your excitement as a catalyst for the idea; this will drive motivation and buy-in.

Finally, it's more about attitude. We leverage our core values such as "our passion for our customer's satisfaction" and "our dedication to a patient's overall experience with our medical devices" as the fuel to keep our ideas moving. We will simply never be satisfied with the status quo. Seemingly small ideas can disrupt an industry. Our worlds change rapidly - as a leader in customer experience, it's our responsibility to always be thinking about what customers will value tomorrow.

January 22-25, 2018 Fort Lauderdale, Florida

Register with Code FIELD and Save 20% www.iotevolutionexpo.com

Defining the Impact of IoT on Business Solutions, the Field and the Enterprise

EVOLUTION EXPO





Explore Groundbreaking IoT Technologies and Solutions

- Optimize Business Processes Apply IoT across your Value Chain
- Increase Productivity Find smart and connected solutions that drive data and business intelligence
- Find New Revenue Opportunities Discover IoT's impact on developing new products

Diamond Sponsor



Gold Sponsors



Corporate Sponsor



Connect with us @IoTEvolution | #IoTEvolution

Ziegler CAT Improves Service Through Video Collaboration

With the use of a video collaboration tool, Ziegler CAT has reduced the length of its technology support calls by 50 percent.

With 22 locations in Minnesota and Iowa, Ziegler is one of the largest Caterpillar dealers in North America. Ziegler sells and services construction, paving, forestry, and mining equipment, as well as generators and industrial engines. In the agricultural market, Ziegler represents Challenger, AGCO-application, and Lexion machinery in Minnesota, Iowa, Wisconsin, and Missouri.

Ziegler adds various technologies to the equipment it sells to provide complete solutions for its customers. The company has nearly 300 field



Todd Hesse of Ziegler CAT believes that in three to five years, the majority of companies will be using video collaboration — but for now it is a competitive differentiator.

technicians who provide service to customers as part of warranty contracts or as billed services. In addition to the team of field technicians, Ziegler employs 50 "TCs" or technical communicators. The TCs take calls from field technicians on jobs to help them diagnose and troubleshoot issues, as well as from customers via a 1-800 number when customers are trying to resolve issues on their own.

When William H. Ziegler founded the company in 1914, he set a corporate philosophy that still

stands: "Sell the best equipment, provide the best service." Todd Hesse, product manager for Precision Ag Technologies at Ziegler CAT, had this philosophy in mind when he recommended the company explore how the use of video collaboration technology could improve service. Hesse has been with the company for 10 years, and during his tenure has had numerous roles including functions in which he was closely involved in the service process. While he was interacting with customers through service, he realized the opportunity that existed to leverage technology to streamline service and ultimately improve the customer experience.

Broad Product Portfolio Leads To Service Complexities

"Because we have such a variety of equipment, with more than 30 different technologies in use, providing service is a bit complex," Hesse explains. "Trying to diagnose issues and suggest repairs over the phone across so many products wasn't easy or often even possible. So what would happen is, a field technician would drive three hours to do a five minute repair, and then three hours back." As Hesse witnessed these inefficiencies firsthand, he realized that with all of the technologies available today, there had to be a better way to remotely diagnose and even repair problems. As he changed roles again and had some additional time to investigate, he began researching options.

Hesse first spoke with his manager about the idea of deploying a video collaboration tool to enable remote support. His manager was on board with the idea, and Hesse's research continued. He used Google search as his main method of gathering information, trying a variety of search terms to find the right tools. He came up with a list of about 10 vendors this way, with three that made his short list.

At this point, his manager indicated that he

Case Study

needed to formalize his business case and present it to the Ziegler executive leadership team. He conducted a product demo to show the team how simple the solution is to use and cenDuring the smartphone deployment, Ziegler began testing the Onsight solution with some TCs and parts employees (to help more accurately identify the proper parts to send to a

tered his business case on the company's mission statement. "Our mission statement is to satisfy customers with innovative solutions that set the standard for value in the markets we serve," he explains. "Surrounding that vision are all of our company standards - integrity, customer focus, continuous improvement, and so on. If you look at that mission and those principles, and then look at the capabilities this technology was going to provide our business, it was a pretty clear case."

Hesse got buy-in from the leadership team, and the company selected Librestream's Onsight video collaboration platform. "The workflow of Librestream's solution was the best fit for us," explains Hesse. "By that I mean, it didn't change the way we currently interacted with our customer base, but it gave us an additional form of communication to use when we

deemed necessary." What Hesse is referring to is that when customers (or field technicians) call the 800-number with an issue, they are routed to a TC based on Ziegler's own criteria. Many of the solutions Hesse evaluated necessitated a direct line with the support contact, giving more control to the customer and taking away Ziegler's ability to manage the routing of the calls as the company sees fit. "All support personnel are logged in our phone system and queue based on skill-based routing," Hesse adds. "We want to make sure we're maximizing the use of our resources — we don't want one person taking 10 calls while other TCs sit idle. We liked that we control when to use Onsight, and we can keep the distribution of calls even."

Video Collaboration Deployment Challenges

Ziegler was already in the process of deploying smartphones to its field technicians so that each group (construction and agriculture) could use apps specifically for predelivery inspection.



Todd Hesse of Ziegler CAT says of the company's pre-video collaboration days, "Trying to diagnose issues and suggest repairs over the phone across so many products wasn't easy or often even possible. So what would happen is, a field technician would drive three hours to do a five minute repair, and then three hours back."

customer). Once the smartphones were in the hands of some of the field technicians, a pilot began with 10 TCs and 10 field technicians. Ziegler was happy with the way the platform performed during the pilot, and plans for full-scale rollout began.

One of the biggest challenges Ziegler faced in fully deploying Onsight was the dispersed nature of its field force. Some of the company's technicians are dispatched from home and don't report to an office regularly, so scheduling training with each of the nearly 300 technicians was a feat. Hesse scheduled branch visits to try to train the majority of the technicians and then added some web training for those who couldn't attend a session live.

Besides the logistical challenges of training all the technicians, Zielger also encountered some employee pushback common with the introduction of new technology. "Overall, the feedback was positive," says Hesse. "But with the nature of the solution, if you're interacting with a

Case Study



"Our goal with technology is to be cutting edge. Not bleeding edge, but cutting edge."

Todd Hesse, Ziegler CAT

customer who has a poor connection, you can experience some issues. That's no fault of the solution, just the nature of cellular connectivity. When things like this would happen, the employees who were skeptical were quick to point out the problems and say 'It doesn't work.'"

While the solution is fully deployed, training is ongoing. As Hesse puts it, "We are training for awareness. We've fully rolled out, but we're still working on full adoption." The way Onsight is being used, it isn't a mandatory tool for TCs or technicians to use — therefore, the company has to continue the awareness of the tool and work to get full buy-in and adoption from employees. Hesse explains that Ziegler just recently began tracking use of the solution so that management can look for gaps in adoption to target training more specifically.

Communicating New Capabilities To Your Customer Base

In addition to the training of its employees on the Onsight video collaboration tool, Zielger also had to develop a strategy to communicate the new functionality to its customer base. "We worked with our marketing team to determine the best way to get the message out through our website and email blast," says Hesse. "We also spent time educating our sales team on how to describe the value of Onsight to our customers, including providing demos. Demos our sales team conducts have proven to be the most successful tool in making our customers aware of Onsight, what it can do, and how it works."

All field service technicians have the Onsight app downloaded to their smartphone, and Ziegler prompts customers to download it as sales are made or service is required. With the app installed, TCs can quickly initiate a video collaboration session with the field technician or customer in the field. When working with customers to resolve an issue, TCs can send a text to the customer's smartphone that provides two links — one to download the Onsight app if they haven't already, the second to initiate a live video stream if the app is installed. All the customer has to do is click the appropriate link, and the TC can use Onsight to remotely diagnose — and often repair — issues. While Onsight is in use — either with field technicians or customers — TCs can take photos of the live stream, record it if necessary, and telestrate to point out certain things.

The benefits of the Onsight solution have been particularly clear to Ziegler when it comes to technology support calls (versus equipment support calls). With the use of Onsight, the length of a support call for a technology issue has been reduced by 50 percent. For equipment support calls, the time to resolution has been reduced by around 20 percent. Onsight has also eliminated the need for TCs to visit customer sites which, while not frequent, was sometimes necessary for particularly difficult support calls. "While we do want to measure the impact of the tool, it's much more than that to us - we feel it is a major differentiator for us in the marketplace. In three to five years, everyone will be doing this, but right now it truly sets us apart," says Hesse.

Looking Ahead To Expand Collaboration Possibilities

Ziegler is in the investigative stages with wearable technology, and Hesse thinks that could be a next area of investment for the company. "There have been a lot of breakthroughs with wearable technology recently, including the latest iteration of Google Glass. When it comes to field service, it would be nice to have the handsfree collaboration a tool like Google Glass would allow. So we're looking into that. Our goal with technology is to be cutting edge. Not bleeding edge, but cutting edge," says Hesse.

Markem-Imaje's Quest For Service Standardization

Markem-Imaje just completed a field service overhaul in order to improve efficiency, create additional revenue, and provide a better customer experience.

Markem-Imaje is a Dover Corporation company that specializes in printing and marking technology. The company operates in 30 countries direct, employs more than 3,000, and has a team of 700 field technicians. Markem-Imaje's customers include Procter & Gamble, Unilever, Coca-Cola, and Pepsico. The company's field technicians provide a combination of installation, training, break-fix, contract repair, and presales support services.

When you really stop and think about an operation this large, the difficulty of truly standardizing the service process and delivering a uniform customer experience becomes crystal clear. While no easy feat, this process of standardization is exactly what Markem-Imaje is in the midst of tackling. Jack Rijnenberg, director of global customer service at Markem-Imaje, is heading up the company's undertaking of standardizing its field service processes and technologies worldwide.

Lack Of Standardized Processes Leads To Service Inconsistencies

Before this standardization project began, the many divisions of Markem-Imaje each used different methods and tactics to manage field service operations — and along with those varying methods came inconsistent processes and no uniform delivery of service.

"So services provided in India could differ quite a bit from the services provided in America, because there were no common tools being used," explains Rijnenberg. "One of our biggest challenges was determining how to ensure standardization and best practices of service delivery and, as such, have the same uniform data and KPIs to enable us to develop a continuous improvement system to drive performance in a standardized way across all of Markem-Imaje."

As Markem-Imaje acknowledged its challenge and identified its need for standardization, the company also recognized that a large opportunity existed to create additional revenue by better enabling its field technicians to assist in lead generation.

Markem-Imaje's leadership had the foresight to realize that if the company were going to undertake such a major change as standardizing all of its operations, during that project was the time to completely review and reshape the service processes to make sure they were the most effective and efficient possible. As part of this evaluation and overhaul, the company identified the opportu-



Markem-Imaje selected field service software from Coresystems (which is used in some regions on iPhones, and in others on Android smartphones) to give field technicians a service dashboard on their mobile device where they can view their work and communicate in real time with the back office.

nity for service to assist more in the sales process. Markem-Imaje set out to develop a better strategy and process for equipping its field technicians to develop sales leads.

"We had three primary goals as we embarked on this project," says Rijnenberg. "We wanted to improve field technician efficiency, we wanted our service operation to generate additional revenue streams, and we wanted to offer a better, more consistent customer experience." "Our focus is on continuous improvement. It is hard work — the success is 80 percent sweat and tears, and it never stops."

Jack Rijnenberg, Markem-Imaje

Field Service Pilot Fail Solidifies Solution Selection Criteria

Markem-Imaje had actually deployed a field automation solution in the Americas that was not successful. "Based on that experience, we learned what would not work well," says Rijnenberg. "That pilot gave us the insight we needed to develop clear criteria for what we were looking for in our field service software." One of the major criteria is that the solution needed to easily integrate with SAP, and Markem-Imaje had a list of about 10 other characteristics and capabilities it was looking for.

After evaluating a number of solutions, Markem-Imaje decided to pilot Coresystems' field service software. Rijnenberg and his team were tasked with building a business case for the investment and then piloting the solution for six months to prove whether the theoretical business case would materialize.

This pilot process began in 2016 in America and Japan. Markem-Imaje chose America and Japan specifically based on the skill level of the technicians in those regions. "One of the main drivers of our business case was enabling lead generation," explains Rijnenberg. "The Americas' field technicians are further advanced when it comes to lead generation, and so I thought it would be most telling to equip half of them with the tool and compare their performance with those equally capable techs not using the tool."

The Coresystems solution (which is used in some regions on iPhones and in others on Android smartphones) gives field technicians a service dashboard on their mobile device whereby they can view their work and communicate in real time with the back office. Service orders have to be standardized and automated and are completed by technicians through the Coresystems solution on their mobile device. The solution has also standardized and automated the lead generation process and offers additional functionality such as stock management, time allocation, remote helpdesk, and knowledge management. Markem-Imaje worked with a consultant to develop appropriate incentives for the field technicians developing sales leads, and technicians are given a financial incentive if a lead they generate results in a sale.

"The solution provides far better collaboration among company functions," says Rijnenberg. "It even enables the field technicians to communicate directly with the account managers."

Impressive Field Service Automation Pilot Results

The results of the pilot were impressive. Field technicians were between 20 to 30 minutes more efficient per service order, the company experienced a 60-percent increase in upsell and cross-sell, and invoicing was sped from one week to less than one day.

After its successful pilot, Markem-Imaje completed deployment in the Americas and Japan, as well as France and the U.K. The company is currently in deployment in Germany and other parts of Europe. There have been a couple delays in deployment, one related to ensuring the solution complied with the high level of security that Markem-Imaje's parent company, Dover, requires, and the other during some further development of the Android version of the software.

Think again about the magnitude of this project — it isn't as simple as taking an automation tool and overlaying it atop of what the company's field technicians are doing. To complete this mission successfully required a thorough review of the processes across operations in 30 countries to determine what indeed best practice was and to decide how to enable the additional functionality of lead generation that was new to many divisions. In many instances, this project completely altered the way certain pockets of Markem-Imaje operated.

Because this was such a major change, Markem-Imaje had to carefully consider how to best train its employees not only on the new technology but also the new processes. "Our strategy was to combine the training of the tool with training technicians on how to better engage with customers and how to look for opportunities for upselling and cross-selling," explains Rijnenberg. "The idea of training technicians on upselling wasn't about 'checking a box' to upsell but rather to educate them

on how to approach each customer interaction with the mindset of looking for how to maximize the benefit they can provide the customer. What advice could they provide to be helpful? Are there other products or services the customer would benefit from?"

Major Change Means Major Change Management

Developing a thorough change management strategy was crucial with this momentous a change. "This project required very strong change management," says Rijnenberg. "As we were standardizing our processes and developing the solution, we looked at each process and thought through everyone it touched. We worked to determine how effective it was, what the best way to do things would be, and how the technology would factor in. As we went through this exercise, we identified all areas of change and discussed how we'd address those with the appropriate communication and training."

He specifically points out the fact that because service was con-

ducted differently in each country, even each location, Markem-Imaje had to take the time to communicate the need for such change. "We had to spend the time to explain why we no longer wanted to do things differently in America versus India versus Italy," says Rijnenberg. "We had to explain — we have the same machines, we want to provide a consistent level of service, and that's why we need the processes to be the same everywhere. In some instances, it took a lot of convincing."

Getting buy-in from the top down was key to Markem-Imaje's change management success. "Everyone needs to agree on the approach being taken," explains Rijnenberg. "From the top down, everyone needs to be aligned on the objectives, what it will take to achieve them, and how that plan will be executed." It's also important to keep in mind that change management isn't a one-time activity; it's an ongoing evolution. "There's an initial push with communication, but it's an ongoing effort," says Rijnenberg. "Our focus is on continuous improvement. It is hard work — the success is 80 percent sweat and tears, and it never stops."



One of Markem-Imaje's primary goals of its field service overhaul was to enable the service technicians to assist with lead generation to ultimately increase revenue. "The idea of training technicians on upselling wasn't about 'checking a box' to upsell but rather to educate them on how to approach each customer interaction with the mindset of looking for how to maximize the benefit they can provide the customer," says Jack Rijnenberg of Markem-Imaje. The pilot proved successful, with a 60-percent increase in lead generation.

Standardization Opens Doors For Future Advancements

We discussed Markem-Imaje's three goals for this project: efficiency gains, lead generation, and customer satisfaction. Through the pilot, Markem-Imaje has proved that the company will be successful in accomplishing those three goals. But the other aspect of this project is that the standardization of service serves as a necessary step to prepare the company for its next phase of transformation. "The service we provide today is quite conventional in the sense that it is reactive in nature," explains Rijnenberg. "There's a clear movement in the service industry toward predictive service, and that's the direction we need to move in."

By standardizing its service processes and delivery and automating those processes, Markem-Imaje is primed to begin researching the use of IoT and other enabling technologies to migrate its service process from a reactive, break-fix model to an IoT-connected, predictive service model.

Case Study

Field Automation Fuels Growth

This housing development company expects a net \$1 million benefit from the investment in a field automation solution.

Dominium is one of the nation's largest affordable housing development and management companies. The company manages more than 27,000 apartments in 23 states, which is more than \$2.2 billion in properties. Dominium has a field service staff of 400 technicians who are responsible for repairs and services at the properties, and another 200 property managers who conduct bi-annual inspections for each property (more than 50,000 inspections each year).

With such a large operation, it is hard to believe that until the beginning of this year, all of Dominium's mobile



"Device selection was critical for us, because there were a number of things we wanted — and because it was the first time we were handing our employees a tool like this, so we wanted to get it right," says Jim Mitchell, director of maintenance and purchasing at Dominium.

operations were paper-based and very manual. That goes to show that while the variety of technologies available today to help field service companies automate their operations is advanced and available, there are still plenty of companies that have yet to take

service automation. The reasons for this are varied, but the companies I've talked with have named

the plunge into field

everything from feeling comfortable with 'business as usual,' to having trouble obtaining the buy-in needed for the investment, to challenges finding the time to properly evaluate the options. Inevitably, though, like Dominium, they all reach a point where they know a change is necessary. For Dominium, the inefficiency of the company's manual, paper-based mobile operations became glaringly apparent as the company continued to grow. By 2025, the company expects to be the country's preeminent private developer, owner, and property manager of affordable housing and investing in a field automation solution was one of the keys to achieving that goal.

The company uses a program called Yardi, which is a property management platform that includes ERP and CRM capabilities. But from a mobile perspective, both the field service and mobile inspection processes were entirely paper-based. "Our paper-based processes were not only rife with inefficiencies, but there was no consistent data capture of any kind," explains Jim Mitchell, director of maintenance and purchasing at Dominium.

Paper Work Order Headaches

Dominium service work can come in through calls to the company, via a tenant web portal, through a tenant stopping into a property management office, or even stopping an employee on the grounds to request service. However the service work is indicated, it is entered into Yardi by a Dominium employee. "In the past, someone in the office would print two paper copies of every service request, and then the technician would pick up these papers and take them to the job site," explains Mitchell. "The technician would perform the service, take notes on one copy of the work order, and leave one at the apartment for the customer. The other was brought back to the office where an employee would manually enter the technician's notes into Yardi, along with the time spent on the repair [labor]."

The assignment of these work orders was left up to the supervisors and also had to be done manually. The only way a technician knew if there was a work order that needed to be done was to stop in the office, which they did regularly to check. "One of the biggest inefficiencies we had was the constant back-and-forth trips to the office, because many of our properties are scattered," says Mitchell. "There's this guy hopping on and off a golf cart, checking for work orders. It's a significant part of their day." Besides the inefficiencies, there were also accuracy issues due to the duplicative data entry.



"People who are doing a good job often don't want to change, because they don't understand why they need to do things differently."

Jim Mitchell, Dominium

On the inspections side of the business, a paper checklist was used but many times not as intended. "We'd have employees just note 'everything looks good' instead of following the checklist as they were supposed to," notes Mitchell. "Those checklists were then scanned in, and there was no meaningful way to follow through on the findings."

Mobile Worker Disconnection

Besides the inefficiencies of the manual processes, what Dominium also began to recognize is the fact that its mobile employees were very disconnected. They didn't use any sort of mobile device, so there was a lot of company information and communication they didn't have regular access to. "We had 400 field technicians within our enterprise without ready or convenient access to a computer," says Mitchell. "Any information that was posted to our company intranet, 40 percent of our workforce didn't see. Our policies and procedures, safety and employee manuals, all of that is online - and if any of those workers wanted to access that information, they had to go into the office. There was a really cool company forum I came across that hadn't been used in years, because it just wasn't easy to find. Our mobile workers were disconnected, and we wanted to empower them by putting computers in their hands."

So Dominium set out to equip its mobile workers with a mobile device and to automate the paperbased work order and inspection processes. Through the company's research, it learned that the Yardi platform had various mobile modules it could use to build the necessary field service and inspection applications. The company developed those apps itself and, in doing so, went through the exercise of reviewing and standardizing the workflows and processes. For the inspection app, Dominium actually purchased a solution on an interim basis to use as a template for the inspection app development.

While Dominium's team worked on those apps, the company's search for the right mobile device began. "Device selection was critical for us, because there were a number of things we wanted — and because it was the first time we were handing our employees a tool like this, so we wanted to get it right," says Mitchell. First, Dominium wanted to be able to deploy just one device across the service and inspection functions to simplify IT support and management.

Secondly, the company wanted a rugged device. "We wanted something extremely durable," says Mitchell. "We knew from the beginning we weren't interested in a consumer device. They are harder to lock down and control, and in all honesty we didn't want a device our employees were going to try to take home and use for fun." Dominium evaluated five devices before the team chose the Zebra TC55 touchscreen, handheld computer for its employees to use to access the service and inspection applications, along with other company resources.

Field Automation Pilot And Deployment

Dominium piloted the solution with a group of ten properties close to the home office. "For the pilot, we selected employees we felt would succeed with a solution like this — who were on the more tech-savvy side," says Mitchell. "Working with this group in beta enabled us to fine-tune the mobile applications with workers we knew could handle those bumps along the way without getting frustrated."

Once Dominium was comfortable with the development of the solution for a larger rollout, that process began. "One of our biggest challenges was training, since we are so spread out geographically," explains Mitchell. "This was compounded by the fact that this was our first time introducing mobile technology to a workforce

Case Study

many of whom have a self-perception that they 'don't know anything' about computers."

Dominium quickly realized that conducting inperson training with the entire mobile workforce was not feasible, so the company put together a series of webinar trainings at each location, followed by a live Q&A. Once Dominium began the



"There was no silver bullet to driving adoption," says Jim Mitchell, director of maintenance and purchasing at Dominium, of the company's field automation project. "We took a multi-pronged approach until we got it right. It takes repetition, consistent messaging, and clear communication."

remote trainings, tweaks to the material were made as lessons were learned at each location.

Some degree of employee pushback was inevitable. "People who are doing a good job often don't want to change, because they don't understand why they need to do things differently," explains Mitchell. "We needed to be sure to communicate our reasoning to them, but we also put some processes in place to drive adoption." Dominium first incentivized its regional managers on metrics around its workers adopting and using the solution. The company also did audits within Yardi to determine if the mobile applications were being used correctly. Mitchell then met with each of the VPs and regional managers to review the data and explain what it meant in order to develop a plan to ensure full adoption. "There was no silver bullet to driving adoption," says Mitchell. "We took a multi-pronged approach until we got it right. It takes repetition, consistent messaging, and clear communication."

Mobile Investment Pays Off

With the solution in place, the manual processes

and duplicative data entry have been eliminated. Field technicians receive work orders on the TC55 from the Yardi mobile app. (Service requests are fielded and entered the same way as before.) They push a clock icon to accept the job and begin work. At the end of the service visit, they push the clock icon again to indicate the job is complete and then select from a series of drop-down options to identify what the resolution was. They also have voice-to-text capabilities to enter job notes. The information the field technicians enter into the app is communicated with the Yardi backoffice system in real time. The drop-down resolution options provide Dominium with far more normalized data, which allows the company to do an analysis of field work that wasn't possible with the paper-based system. In fact, the company creates a monthly report for the management team to review the standardized data and discuss any potential issues.

On the inspection side of the business, the mobile app has standardized the inspection process and forces the inspector to complete the entire thing. Moreover, as issues are noted on inspections, work orders for service are automatically created in Yardi and routed to the appropriate technician – so it is a far more reliable system to ensure inspection issues are dealt with in a timely manner. Finally, the inspection application allows Dominium to more evenly space and assign the biannual inspection workload.

From the automated inspections specifically, Dominium has experienced a 71 percent increase in chargebacks (i.e., a service issue that was created by the customer/tenant and should be paid for by them). On the previous system, the chargeback process was cumbersome – an employee would have to conduct the inspection, manually enter a work order, manually enter a charge, and then type a letter to the tenant and deliver that letter. "Our chargebacks were exceptionally low because the reality was, it was just too big an administrative hurdle for people to get over," says Mitchell. That 71 percent increase results in income for Dominium that wasn't realized before.

Overall, Mitchell expects the solution to provide a \$1 million net annual benefit through a combination of gained efficiencies, expense reduction, and additional revenue through the chargebacks. The investment in a mobile solution has also helped tremendously with employee engagement. "People now know what we expect from them," says Mitchell. "Their work is measured; therefore, their work is important. We tell them what we're asking them to do and then make sure they do it — employees have responded well to that."

Will Apple's ARKit Advance Field Service AR Deployments?

New APIs will make the development of AR (augmented reality) apps easier.

n September, Apple released iOS 11, which will enable the use of ARKit (announced in June) to allow developers to easily create AR apps for iOS devices. With the growing interest in AR among field service organizations, this announcement should be of interest. ARKit leverages technologies in existing iOS devices (so no new hardware is necessary to deploy the apps), although the new iPhones announced on September 12th will include cameras further optimized for AR use.

Here, we are joined by Nick Elia, research associate, enterprise mobility and connected devices at VDC Research, to discuss exactly what iOS 11 and ARKit may mean for the enterprise. I will say, with the introduction of ARKit — along with the AR technologies provided by Google, Microsoft, and Facebook — it will be interesting to see how AR use expands in the field service space in 2018.

Field Technologies: What features of iOS 11 do you think the enterprise will find most compelling?

Elia: iOS has been around for about 10 years, but this version is of particular interest to many people due to the unique added capabilities that are going to be available, one of which is the new AR framework that Apple has implemented into iOS 11. With this update, Apple has transformed the user experience completely and has put a big emphasis on people multitasking and being able to utilize applications simultaneously.

The key features of iOS 11 include:

Control Center: Apple has redesigned the control center for iOS 11 so users can customize a wide range of settings to fit their specific needs. When the control center is open, the top panel is made up of connectivity controls and music controls, while the bottom panel consists of customizable controls for other applications. The control center is also no longer split across multiple screens, and Apple has expanded its 3D touch integration, so when you press one of the panels, it will display additional options and controls.

Lock Screen/Notification Center: These two have been merged, so pulling down on the touch screen will allow the user to access both.

Persistent Dock: On the iPad interface, Apple has created a new dock that makes it easier to launch and switch between applications. Swiping up on the screen accesses the docking interface, and the Slide Over or Split View function allows the user to utilize multiple apps at once.

Drag and Drop: iPad users have the ability to drag images and links from one application and drop them into another app. This function is particularly useful in Split View mode.

Files Management: The new files application mirrors the finder on macOS and brings all the files that are stored locally (iCloud Drive, Dropbox, Google Drive, and other apps) into one distinct location. This will be available on the iPhone and iPad — a long overdue but welcomed feature for business users.

App Store: The App Store has been completely redesigned, and now there are two distinct sections for applications and games. They also have added a "Today" section that features the newest content available on a daily basis.

Apple Pencil: New capabilities have been added to the Apple Pencil, such as instant markup for PDFs, instant notes, inline drawing, and document scanning/signing.

Siri: Siri has been updated in iOS 11 to adopt more natural voice options and use on-device learning to comprehend specific preferences of the user. Apple has also introduced cross-device Siri Syncing, which will speed up Siri's response

Industry Insight



"While there were many updates and changes to iOS 11, the most notable update we have seen is the implementation of an ARKit that will let developers build AR features into applications."

Nick Elia, VDC Research

time and use end-to-end encryption to protect sensitive data.

Quick-type Keyboard: On the iPad, the new keyboard displays both numbers/symbols, and swiping down can switch between both instead of using a shift key.

Field Technologies: What new APIs were introduced along with iOS 11?

Elia: The new APIs include:

Core ML: Core ML is Apple's machine learning framework that allows developers to create applications with features such as face tracking/detection, text detection, bar code detection, object tracking, and image registration. Developers can use this framework to integrate machine learning models into their apps and leverage the CPU and GPU to achieve the highest level of efficiency and performance.

ARKit: This is a framework that gives developers the ability to build complex augmented reality features into applications using visual inertial odometry (VIO). Using an iPhone/iPad's camera and motion sensors, the kit finds specific points within an environment and pins objects to these specific points, changing the landscape and perspective of the environment you're in. VIO integrates this camera sensor data with CoreMotion data and allows the device to detect how it moves within a room using advanced accuracy and no additional calibration.

While there were many updates and changes to iOS 11, the most notable update we have seen is the implementation of an ARKit that will let developers build AR features into applications. Developers have been busy creating apps using the ARKit; we will be keeping a close eye on enterprise use cases.

We are already seeing notable consumer applications being created by developers using the APIs, including: **Ikea Place:** This application will allow users to preview actual-size furniture options in their home before they purchase. The app is very customizable in that you can let users choose the size, material, and texture of the product, and there will be over 2,000 different items available on the launch date.

Food Network App: The Food Network is developing an app that will allow users to create digital desserts and then get access to the custom recipe for that customized dessert.

GIPHY World: GIPHY is introducing tools that will allow GIFs to be placed into any 3D space. Users can share videos, pictures, and scenes with other people using the app. The scenes aspect is particularly unique in that every scene gets a URL that can be added to or changed by the people you share it with, essentially creating a shared GIF space between users.

Arise: This is an augmented reality puzzle game that you play by tilting your iPhone in order to move your character through various levels. There are no on-screen controls for this app, which requires the user to physically move around in order to complete the levels.

Field Technologies: What do you think ARKit means for Apple moving forward in the enterprise?

Elia: The introduction of ARKit by Apple is notable as it will enable the company to move beyond the traditional 2D camera without implementing costly and complex software engineering and generate additional opportunities not just on the consumer side but the enterprise side as well. Many software developers see AR as offering a huge opportunity for enterprises to improve workflows and be more efficient, and Apple's new ARKit will likely become the biggest seller of AR devices, given the large base of existing users and developers it has. While Apple does see opportunity for enterprise traction with its AR platform, Microsoft and Google still hold many technical/product-related advantages, and many companies are currently utilizing this technology in their operations.

With this ARKit, Apple can now obtain potential customers using some of the following enterprise use cases:

Employee training/recruiting: Companies such as Boeing, Cisco, and even the Red Cross are using AR/VR solutions to cut training time of employees in complex enterprise infrastructures and recruit potential job candidates through virtual tours of the company.

Remote facilities management: Organizations are equipping technicians with solutions that they can use to identify issues before they go out in the field and make repairs. They can see the layout of the environment so they know which equipment is most appropriate to use.

Remote product support: Enterprise users can troubleshoot devices remotely and get instructions on how to repair the device without actually showing up in person to get the device repaired.

Field Technologies: What competition exists for Apple's ARKit with Microsoft, Facebook, and Google's AR Platforms?

Elia: This new framework puts Apple in a better position to compete with the likes of Google, Microsoft, and Facebook, all of whom have developed AR platforms for enterprise/consumer use. The one distinct advantage that Apple's ARKit holds over the Google Tango platform is that it will be available on a wide range of existing devices; Google has relied on Android device manufacturers to implement the Tango platform into its phones. Google recently unveiled a developer preview of ARCore, the company's successor to Tango. ARCore currently supports Google's Pixel devices, as well as Samsung's Galaxy S8. ARCore will use surface detection technologies like Apple's ARKit.

Apple is likely to attract developers' attention, as it can leverage its existing device portfolio with ARKit; Google will need to convince its customers to acquire specialized devices; however, Google is expected to open up ARCore to all Android devices going forward.

Microsoft has established its position as a leader in the AR market with its HoloLens glasses, which are powered through its Windows mixed reality platform. While it has seen success in the enterprise with organizations such as NASA, Stryker, Lowe's, and the U.S. Military, it has not released a consumer version of its HoloLens, and most likely won't until 2019. Although Microsoft is in development of consumer-focused AR/VR solutions, it is still faced with increasing threats from the likes of Apple, which is trying to penetrate the consumer market. In terms of the functional capabilities of its AR offerings, Microsoft is very far ahead of Apple, but Apple holds



The opportunities for AR in field service are vast — including enabling more efficient service trips, facilitating the training of field workers, and offering innovative customer experiences.

an advantage in the fact that they have a bigger base of registered developers (16 million) and will be able to churn out more apps. Assuming just a mere 5 percent (800,000 developers) of these registered developers create AR apps for Apple this year, this will surpass Microsoft significantly, who only had a few thousand developers create 150 HoloLensspecific apps. Moving forward, we expect Microsoft to increase its marketing initiatives and partnerships around AR apps in order to penetrate the massive consumer market opportunity.

In April of 2017, Facebook released its Camera Effects platform, which developers can use to create AR applications. Similarly to Apple, Facebook has several advantages in trying to penetrate the consumer market, with the primary two being its established monthly user base and the resources/ experience it has around developers. Although these are important for generating opportunities within this market, developers using Apple's ARKit can insert AR features directly into iOS applications, which is something Facebook can't compete with. Moving forward, expect Apple and Facebook to compete heavily in the consumer market, with Apple making more progress with the release of its ARKit just six weeks after Facebook launched its platform.

Executive Outlook

Sponsored by:

Your 9-Point Trade Contractor Field Service Software Checklist

Let field service technology help you provide best-in-class service to your customers.

ore than 90 percent of executives agree their organization needs to adapt service models to keep up with customer needs, but only 6 percent of today's population enters the trade field, creating a major labor dilemma. Field service technology is a solution to meet customer demands with a shrinking workforce. Below are nine essential field service capabilities/benefits for today's leading trade contractors.

Work Order Initiation — The execution level of field service is the work order, the tool used to assign the service task to a technician or subcontractor, provide instructions, define a scope of work, and record work performed. Modern field service software must be able to initiate work orders via customer request or maintenance contracts. This results in improved customer experience and support for multiple channel commu-

steve andrew



VP of marketing, IFS www.ifsworld.com

nication such as phone, email, portal, and more.

Contract Management — Contract management is essential to the customer experience. Field service software must create work orders, track service level agreement (SLA) commitments, and generate billing. This functionality will lead to improved revenue streams, measured SLAs, and specific deliverables to enhance the customer experience.

Scheduling & Dispatch — Scheduling optimization can put management in control of the field service workforce by generating an optimized route for the day, episodic scheduling or dynamic scheduling so technicians receive information on one or two jobs at a time and are not setting their own route and schedule, which can be inefficient. Field service software should schedule the right technician with the right skills at the right time to complete a service request efficiently. Scheduling and dispatching capabilities improve labor utilization and lower administrative costs — a great benefit for many commercial trade service organizations.

Quotation — Generating quotes is important for customer service reps in the back office and for technicians in the field so they can sell additional work or even additional service contracts. Information must be available in the system to support adequate pricing and generate field quotes for time and material work and add-on contract work. Such quotation functionality enables upsell work activity, better maintenance outcomes, and improved revenue streams.

Inventory Management — Inventory management is too often neglected in many field service software applications. Modern field service management solutions should track truck stock usage, replenish as needed, and automate supply house purchasing. These capabilities enable reduced inventory leakage, lower carrying costs, and better purchasing processes.

Work Order Execution — A technician should be empowered by work order functionality on their handheld device. Field service software should put critical job information in the hands of technicians in checklist management functionality. It should automate checklist tasking, generating part orders and track progress through rules. Such field service capabilities provides guidance for improved productivity of a new or revolving workforce.

Subcontractor Management — Field service solutions must enable subcontractors to receive and complete work orders easily. They should route tasks to appropriate subcontractors when additional capacity or skillsets are needed. If the subcontractor doesn't accept within a certain time frame, the solution should route the work order to the next subcontractor. This capability can improve subcontractor management for claims and invoice approval.

Closing/Invoicing — While invoicing is typically handled in an enterprise resource planning (ERP) or other financial system, the field service management software must still have functionality that captures all invoicing details in a central fashion. Field service management solutions should streamline the debrief process, accrue costs, and generate invoices. This leads to quicker invoice-tocash, reduced DSO, and fewer disputed invoices. Closing and invoicing can be achieved easily by a flexible invoicing and billing engine with configurable invoice rules.

Analytics — Analytics are important to keep a business running efficiently. A modern field service management solution should provide dashboard reporting for monitoring and measuring performance for your commercial trade organization to proactively manage and improve operational efficiency. Operational metrics are important so you can determine if you are operating efficiently and if your customers are well-served.

Labor shortage in commercial trade services leaves only technology to keep up with customer demands. Modern field service management will provide essential capabilities for you to succeed in areas of revenue streams, customer experience, productivity, scheduling and contracting, and much more.



THE MOST COMPLETE, CONNECTED FIELD SERVICE

IFS offers solutions to give service organizations the end-to-end connectivity that they need to deliver an enhanced customer experience and meet evolving customer demands.

To learn more about IFS solutions, visit IFSworld.com



Analyst Outlook

Field Service Automation Meets Marketing Technology

Looking for solutions beyond field service software can help fuel revenue growth.

f you are a field service executive responsible for managing a profit center, then chances are that revenue growth represents a top priority. You are not alone in this pursuit. Nearly three-quarters (76 percent) of field service providers are struggling with this same issue. Looking at KPIs associated with service revenue growth, we see that only a small percentage (30 percent) of companies are able to consistently achieve attachment rates of 50 percent or more year after year. While the majority (59.5 percent) of companies experience renewal rates of 75 percent or more, only 22.5 percent have achieved renewal rates greater than 90 percent.

Field service leaders have often attempted to overcome these challenges to service revenue growth through investments in technologies such as field service management (FSM) software and mobility solutions. The conventional wisdom is that these initiatives improve the customer experience and enhance the value of field service workers to the customer. As a result, customer loyalty increases, and field service engineers have the tools to generate contract renewals and sell additional





president and CEO, Blumberg Advisory Group www.blumberg-advisor.com

services. Companies who have made these types of investments typically have revenue growth rates that are 20 to 30 percent higher than those who have not.

Field service organizations (FSOs) must invest in state-ofthe-art technology if they are going to offer quality service to their customers and remain competitive. It is important to remember that FSM and mobility solutions are designed to

support the productivity and efficiency of internal field service delivery processes. They are not designed to facilitate customer-facing activities like service sales and marketing. The increase in service revenue made possible through these technologies may not be sufficient for field service executives tasked with achieving massive growth.

Forward-thinking executives understand they can achieve massive revenue growth by concentrating on their sales and marketing strategy. For example, improving their value proposition, expanding or revising service offerings, or modifying pricing approaches. In theory, these improvements have positive results on revenue growth. On the other hand, they are only effective as long as they are implemented in a structured and disciplined fashion, and the tactics employed in carrying out these strategies are utilized on a consistent and persistent basis.

Unfortunately, some FSOs fail to heed this advice. Their strategies may be sound, but their tactical follow-through may be lacking. For FSOs to succeed in the revenue growth game, they must pay close attention to managing their sales and marketing processes (i.e., tactics) with the level of precision and diligence equal to that of managing their service delivery processes.

Technology can play a key role in optimizing service revenue growth in much the same way it optimizes field service performance. However, technology other than FSM or mobility is required to achieve this goal. FSOs who are serious about revenue growth are advised to consider the following types of market-facing software solutions:

Service Contract Management: Keeps track of service contracts, customers, service events and activities, cost and parts usage, histories, etc. Using the reporting features found in this functionality, FSOs can demonstrate the value they bring to customers.

Configure Price Quote (CPQ): Facilitates the responsiveness and flexibility when configuring, pricing, and quoting standard and customized service agreements. FSOs who utilize CPQ functionality are perceived as more effective in meeting customer needs which results in higher attachment and renewal rates.

Customer Relationship Management (CRM): Utilize this functionality to manage customer interactions. Measure the frequency and effectiveness of each attempt at communicating with a customer. Understand where quotes and proposals are in the sales pipeline; notify customers about when contracts are up for renewal.

Marketing Automation: Effective in designing, implementing, and monitoring sales and marketing campaigns when combined with CRM. For example, thought leadership/content marketing campaigns can be used to educate customers on the value of new and existing service offerings.

The feature functionality described above is not a replacement for FSM software but an extension. Many enterprise-class FSM solutions, such a Salesforce, SAP, IFS, and others, include some or all aspects of this functionality. In addition, there are niche solutions on the market, like M-ize, Tavant, Marketo, etc., that integrate with traditional FSM software platforms. FSOs who leverage these marketing-related functions on a consistent and persistent basis can achieve 50 to 120 percent revenue growth. That's massive!



6 December - 8 December, 2017 NH Collection Amsterdam Grand Hotel Krasnapolsky

Europe's Leading Event for Service, Support and Customer Care!

Visit us at FieldServiceEurope.com and **Save 20% off** your pass to the event with code: **FSEU17FTECH**

> "Has been a great experience even after 25 years in services."

Head of Customer Support EMEA, Olympus Europe "Fantastic session that was very informative. We captured some ideas from the presenters and other peer discussions that we are going to try to implement in our own organization."

WW Director Service Marketing, Kodak

"Very useful event. Good discussions with my peers from other companies. I collected a lot of good ideas. Very inspiring."

Senior Director Service Europe, Brooks Automation (Germany) GmbH

Connected Field Service

CONNECT YOUR PEOPLE, PLACES & THINGS

Trimble PULSE[™] allows you to manage, schedule, mobilize and monitor your entire service operation, sending and receiving data from your people, places and things on a single platform.

Connecting your customers, operations, mobile workforce and intelligence enables you to balance customer service with operational efficiency and ensure your service delivery is profitable.

> **Find out more:** www.trimblepulse.com Call: 877 728 7623

DOWNLOAD OUR FIELD SERVICE INSIGHT REPORT NOW: trimblepulse.com/connected-world



TRANSFORMING THE WAY THE WORLD WORKS

CALL CENTER

MANAGE

Streamlined business

operations

MONITOR

Locating and connecting wo workers and assets

B

630

ASSETS &

 \bigcirc

PERFORMANCE & UTILIZATION

M2M NTENANCE WORK

Ø

ြို့

SCHEDULE

Optimized assignment of resources to complete work

MOBILIZE

Real-time access and sl of information

WHAT-I

0

SELF LEARNING

Q

PARTS

<u>___</u>